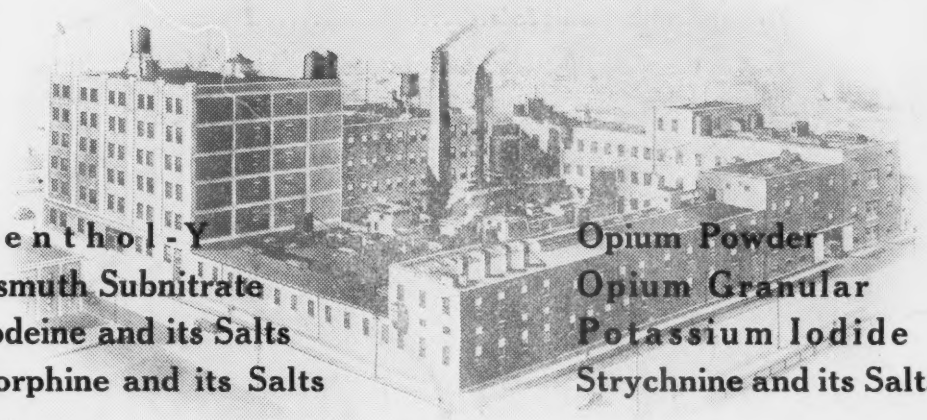
Drug Markets

February 1928

AGE or mere size are not the principal ingredients in the reputation of a manufacturer of pharmaceutical chemicals. The quality of the chemicals and the service of the firm are paramount to the buyer.



Menthol-Y
Bismuth Subnitrate
Codeine and its Salts
Morphine and its Salts
Opium Powder
Opium Granular
Potassium Iodide
Strychnine and its Salts

The New York Quinine & Chemical Works, Inc.

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St. Louis Depot, 304 S. Fourth St.

Geraniol

ANALYSIS

Rose-like Odor	100%
Aldehydes	Absent
Oxidation in Air	Not Noticeable
Alcohols	100%
Citronella Odor	Absent
Acids	Absent
Treatment with Caustic Soda	No Effect

LARGE scale production has enabled us to cut the price of F & F Geraniol to an amazingly low figure.

A letter on your business stationery brings you a free sample.

The FRIES & FRIES CO.

Cincinnati *1501 West 6th St.* ~ **New York** *244 Pearl St.*

Los Angeles *421 East 8th St.*

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EPSOM SALT U.S.P.

Recrystallized

To meet your most exacting pharmaceutical requirements, Dow Epsom Salt, U. S. P. is produced under the most modern and advanced methods of chemical manufacture.

Obtained from twice crystallized material, Dow Epsom Salt production is in the form of very beautiful needle crystals free from fine material.

Freedom from chemical and mechanical impurities, added to its fine appearance makes our product most desirable wherever a U. S. P. grade is needed.

We will gladly send representative samples upon request.

THE DOW CHEMICAL COMPANY
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Branch Sales Offices:
90 West Street, New York City
Second and Madison Streets
Saint Louis

Air photo of works of
The Dow Chemical Company
Midland, Michigan

DOW CHEMICALS

February 1928

Drug Markets

Established 1914

The Business Magazine of the Drug Industries

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The Vertical Merger—Hands Off—Stock Simplification
Essential Oil Outlook—Effect of Automatic Machinery.

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The March Issue

Oral Antiseptics are being marketed in increasing numbers as the care of the mouth and throat become of increasing importance in prevention of disease. Dr. Victor Ross of Lehn & Fink, Inc., has prepared a special article giving the desired properties that oral antiseptics should possess.

Colored Glass as a protective agent for drug products is receiving real attention from the drug manufacturing associations. Dr. William B. Husa who has devoted much time to a study of the basic principles of protection by glass, offers the present knowledge available, and the proper methods to proceed toward a clearer understanding of the subject.

Imported Crude Drugs detained by Government Authorities are often a source of considerable annoyance to consumers. Toward a closer understanding of the reasons for these delays, W. R. M. Wharton, Chief, Eastern District, Food, Drug and Insecticide Administration, gives the application of the law and regulations toward each crude drug imported.

VOL. XXII **DRUG MARKETS, INC.** NUMBER 2
PUBLISHERS

PUBLICATION OFFICE, PITTSFIELD, MASS. EDITORIAL AND BUSINESS OFFICE, 25 SPRUCE STREET, NEW YORK CITY

Editor THOMAS R. FARRELL
Publisher WILLIAMS HAYNES
Business Manager FRAZER V. SINCLAIR

PUBLISHED MONTHLY AT PITTSFIELD, MASS., SUBSCRIPTION PRICE, TWO DOLLARS A YEAR, IN ADVANCE, POSTAGE PAID TO ALL COUNTRIES; THREE WEEKS' NOTICE IS REQUIRED TO CHANGE SUBSCRIBER'S ADDRESSES, AND WHEN NOTIFYING KINDLY GIVE BOTH OLD AND NEW ADDRESSES. PRINTED BY THE SUN PRINTING CO., PITTSFIELD, MASS., AND APPLICATION MADE FOR ENTRY AS SECOND CLASS MATTER AT THE POST OFFICE, PITTSFIELD, MASS., UNDER THE ACT OF MARCH THIRD, 1879.

has your product *"it"*?

C.C.C

VANILLIN
COUMARIN
BENZOATE OF SODA
BENZOIC ACID

Commonwealth Products never touch the tin in which they are packed. Every can has an inner container of tough, tear-resisting paper to prevent contamination.

"IT" in a product may be defined as something that attracts sales—something that makes an article win a steadily increasing consumer acceptance.

Any product that sells regularly season after season, year after year, has "it". Products that have become buy-words for dependable quality have "it". And it may be said truthfully, only carefully compounded products widely known for uniformity, with the quality of each ingredient carefully scrutinized, ever gain a lasting reputation for possessing the so-called sales element "it".

By specifying Commonwealth when ordering Vanillin and Coumarin you are assured of the uniformity that makes for quality. Nationally known manufacturers of products sold from coast to coast depend upon the purity and long-standing quality of Commonwealth materials. Back of the Commonwealth label, also are the facilities for prompt dependable service characteristic of the Mathieson organization.

Convenient warehouse stocks are ready to serve you on short notice. Just specify Commonwealth!

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Commonwealth Division

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PHILADELPHIA CHICAGO PROVIDENCE CHARLOTTE CINCINNATI

STOCKS IN PRINCIPAL CITIES

7 Warehouse Stocks

Conveniently Located to Serve You

With large warehouse stocks conveniently located throughout the country, we are ready to serve you with large or small quantities of EXTRA LIGHT PRECIPITATED CHALK — when you want it.

Each year finds tooth paste manufacturers using more of this domestic product. The demand continues to grow as more and more chalk-buyers learn that this domestic brand *does possess* the *quality* they require.

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Cincinnati
B. & O. WAREHOUSE

Cleveland
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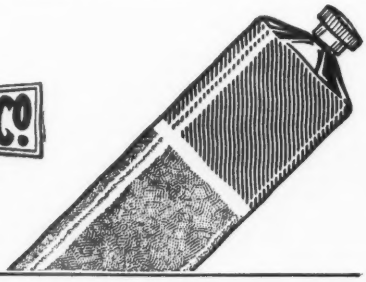
200 FIFTH AVENUE
NEW YORK

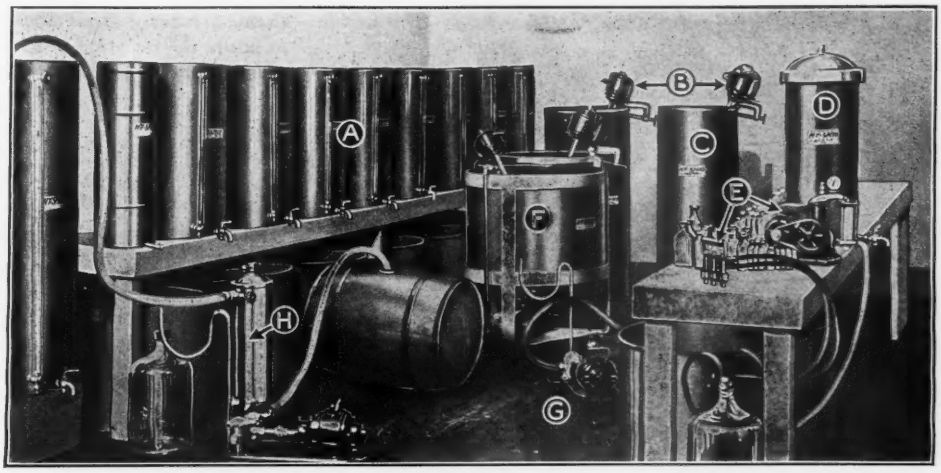


PLANT: PIEDMONT, W. VA.

EXTRA LIGHT PRECIPITATED CHALK

Found In The Tubes Of Leading Tooth Pastes

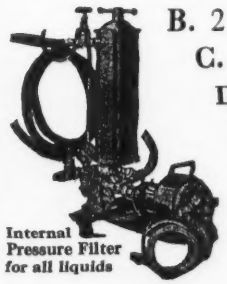
$1,500



That's all it costs for a complete modern plant with improved "HY-SPEED" equipment to turn out over

15,000 Bottles of Liquid Per Day

The above photograph shows the following equipment:


Internal Pressure Filter for all liquids

A. 8 "ALSOP" 50 gallon glass lined air-tight storage tanks.
B. 2 Geared model "HY-SPEED" portable electric mixers.
C. 2 "ALSOP" 100 gallon glass lined mixing tanks.
D. "HY-SPEED" gravity asbestos filler tank.
E. "HY-SPEED" vacuum bottle filler with handle.
F. Complete manufacturing unit to mix...filter...and pump liquids.
G. Portable electric bronze pump with hose.
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Why not let us estimate on supplying new, modern, money-saving equipment....on terms that will interest you....

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Famous Products Perfectly Delivered

A. J. Krank Manufacturing Company pack their Lemon Cleansing Cream in tubes of Alcoa Aluminum to insure the retention of its original high quality and purity.

ALUMINUM
Collapsible Tubes

MORE than five years ago the A. J. Krank Manufacturing Company found in the Alcoa Aluminum Tube a package good enough to safeguard the quality of Krank's Lemon Cleansing Cream, Krank's Lather Kreem for shaving and Fix-A-Gloss for the hair. Since then, A. J. Krank Manufacturing Company have been large and steady users of Alcoa Aluminum Tubes—thus maintaining their high packaging standards and at the same time effecting a material saving in packing costs.

The rare combination of quality and economy achieved in Alcoa Aluminum Tubes is primarily due to the metal from which they are made.

This metal, Alcoa Aluminum, was developed for the collapsible tube industry by Aluminum Company of America and is made by them exclusively.

Alcoa Aluminum Tubes present advantages that no manufacturer can afford to disregard: On the one hand, costs are reduced. Alcoa Aluminum Tubes cost less to buy and also less to fill and ship. On the other hand, the packer's most exacting requirements are maintained.

Alcoa Aluminum Tubes possess the perfect balance of strength and flexibility, they take all colors beautifully, finish beautifully and guarantee the safe and satisfactory delivery of the products they carry.

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To packers wishing further information we offer the technical knowledge of our laboratory force.

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Offices in 18 Principal American Cities

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ALUMINUM IN EVERY COMMERCIAL FORM

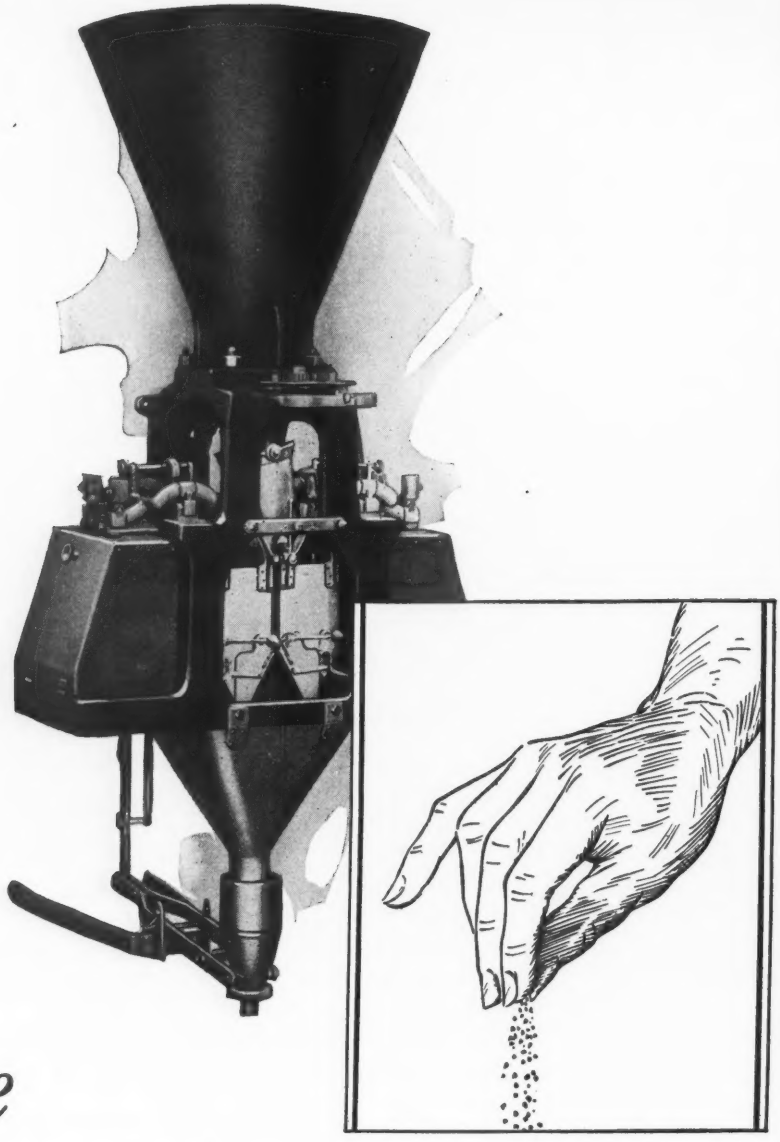
"Uniform Quality and Size"

"WE order from you with the assurance that each shipment, each package and each cork are of uniform quality and size—with the knowledge that wastage is eliminated and our packages properly and perfectly sealed" writes Mr. K. W. Ellis, Secretary of the Char-Tex Company, Des Moines.

The sound, high-grade corkwood from which they are made; the accurate, modern machinery that cuts them to exact size; the rigid system of inspection that assures uniform, standard grades—these are the reasons why all users of Armstrong's Corks have the as surance of which Mr. Ellis speaks. A request from you will bring samples and prices free of obligation. Armstrong Cork Company, 132 Twenty-third Street, Pittsburgh, Pennsylvania.

Armstrong's Corks

A grade for every need—Every sack guaranteed



Accurate

. . . to the last few grains

In a nutshell, this is the story of the No. 200 Automatic Continuous Stream Scale. This type of scale, with its double unit weighing feature has been in successful operation in a number of representative drug and chemical plants throughout the United States for many years.

It is particularly adapted for use where fairly free flowing materials are to be weighed into containers of from one to twenty ounce capacities.

The supply chute is electrically actuated to direct the material alternately from one scale hopper to the other, so as to give ample opportunity for accurate weighing of the last few grains without slowing the speed of operation.

The result is that 90% of the containers are filled to *balanced* weights, the remainder to within less than 1/16 of an ounce . . . all at a speed of approximately 45 per minute.

Send for descriptive literature today.

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American Machine & Foundry Company
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You and your Son are invited to see Sun Tubes made. Made in a very short time—"while you wait". I know the Boy will like it. Exclusively a Sun Process.

Frank H. Fuch
Pres.

P. S. On appointment, our car will meet you at Park Place, Newark. Come, whether a buyer or not. If you have seen tubes made, so much more you will appreciate your visit.

Customers welcome this Tailor-made Seal

THE people who buy your product will be quick to appreciate the bright, inviting appearance and the convenience of R-O Aluminum Seals; and because R-O Seals give positive *hermetic* closure the customer always finds the "R-O-Sealed" product in perfect condition, just as it leaves your packing room.

R-O Seals always fit. *They have to fit*—for each seal is "custom-tailored" right on its own individual bottle. A special sealing machine holds the blank R-O Seal firmly in place, shuts out the air and forms the threads into the threads of the bottle, all in one operation.

R-O Seals are easy to remove and replace. They make an excellent reseal. They are made of pure Alcoa Aluminum, the rustproof metal.

And the remarkable thing about the R-O Seal is that, despite its all-'round superiority, it will probably reduce your packing cost.

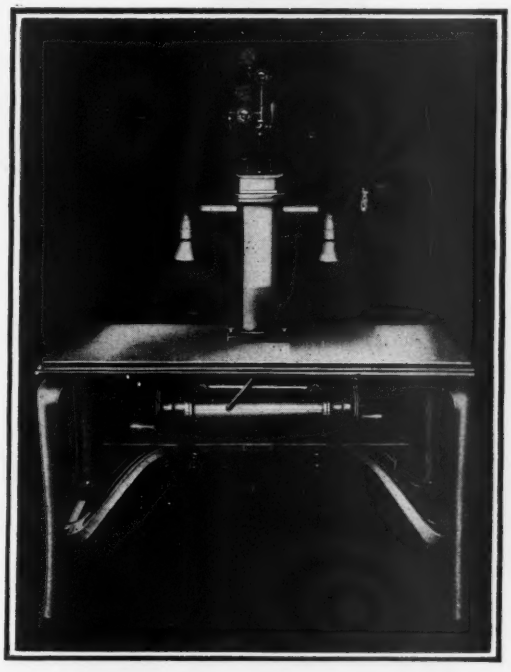
R-O Seals are available with liners for every purpose. Write us for complete information.

R-O
Aluminum Seals

ALUMINUM COMPANY OF AMERICA
2459 Oliver Building, Pittsburgh, Pa.
ALUMINUM COMPANY OF CANADA, Ltd., Toronto, Montreal, Canada

ALUMINUM IN EVERY COMMERCIAL FORM

ANNOUNCEMENT



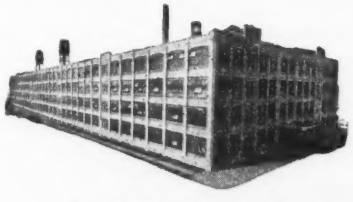
The Fee Process Weighing and Filling Machines

THE American Machine & Foundry Company has acquired the license to manufacture and sell the complete line of Fee Process Weighing and Filling Machines heretofore manufactured and sold by The Lamb Corporation.

To the present and potential users of these ultra-modern automatic machines there are two significant facts to be noted in this announcement:

1. Manufacture and sales will be handled by an organization possessing ample facilities, as evidenced by a background of twenty-seven years of successful work in the design, construction and adaptation of automatic machinery to many varied industries.
2. Laboratory research and development work on these machines to adapt them to new uses will continue under the direct supervision of Mr. Fee himself.

Succeeding advertisements in this series will discuss the application of these machines to various types of work. Meanwhile, let us know your problems, and competent engineering advice will be furnished.

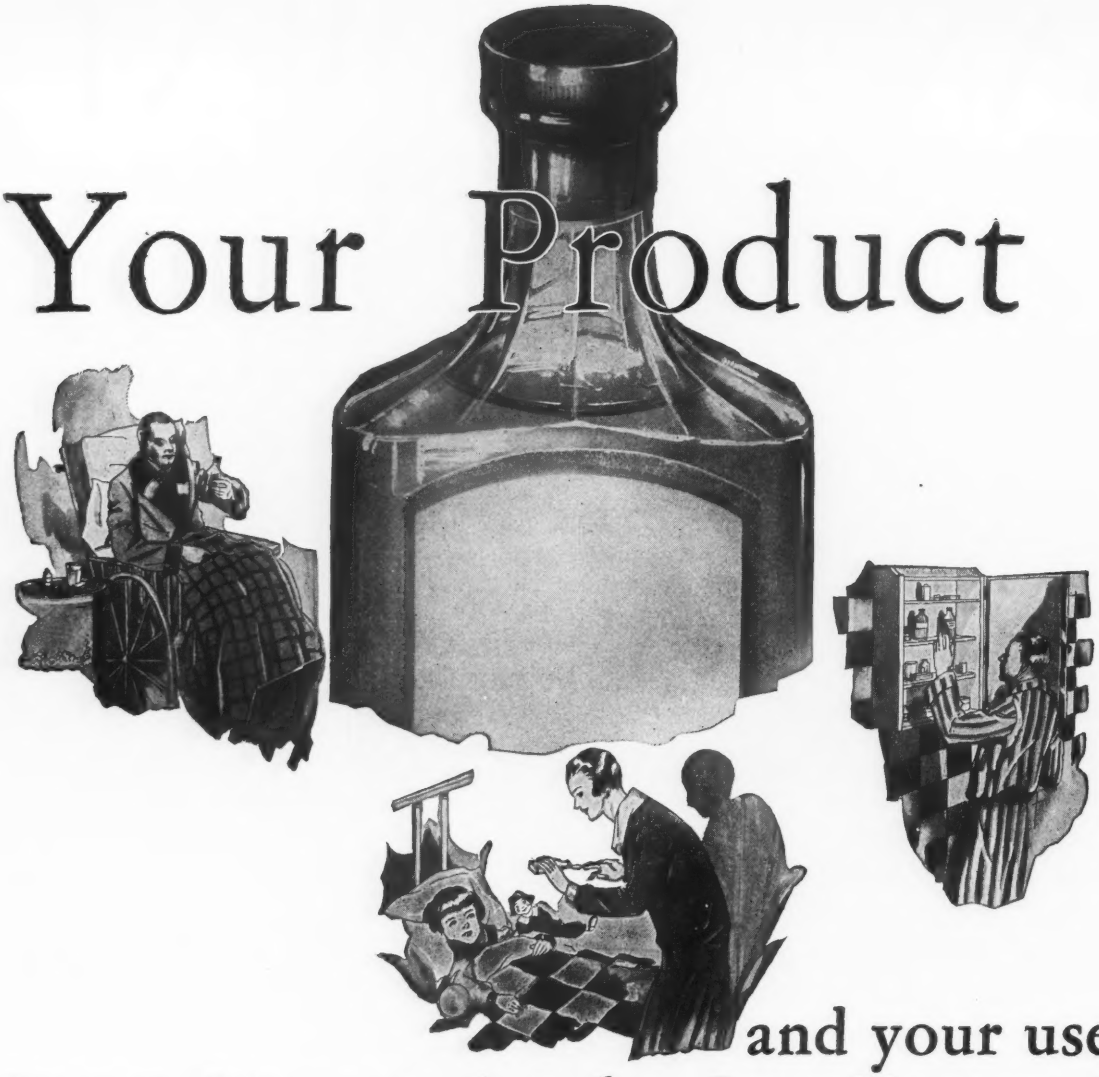


In this plant are produced many of the world's finest automatic machines to meet production needs in the food products, chemical, tobacco and printing industries.

AMERICAN MACHINE & FOUNDRY COMPANY
5502-5520 SECOND AVE., BROOKLYN, N. Y.

AUTOMATIC MACHINERY

Your Product



and your users deserve this protection that CAPES-VISCOSE give

DO NOT think that consumers will fail to appreciate your efforts to protect them from Dilution, Substitution or Tampering of your products. No article of trade enjoys more personal use in the home or sick room than drug products. That's why users exert such unusual care in choosing their brands—selecting only those products that give evidence of genuineness, of purity and non-adulteration. In a word, products that are *sealed*. Sealed with Capes-Viscose, your product is absolutely protected against every tampering-evil prevalent in the industry today. Capes-Viscose are hermetical seals, *that cannot be imitated.* Capes-Viscose are proof-apparent that this is so in the customer's eyes. ¶ Let us send samples. See how Capes-Viscose add to the appearance of your bottles. See how simply they are applied. And find out how little this method of bottle protection really does cost.

CAPES-VISCOSE, INC.

Sales Offices: 134 Madison Avenue, New York
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CAPES-VISCOSE

SELF-FIXING BOTTLE CAPS

It's Only a *Quarter Turn* to **Bigger** Sales via the **AMERSEAL** Cap

Mallinckrodt

FINE CHEMICALS

For Medicinal, Photographic, Analytical, Industrial Purposes.

MALLINCKRODT CHEMICAL WORKS

SAINT LOUIS MONTREAL PHILADELPHIA NEW YORK

Drug Markets

Vol. XXII FEBRUARY 1928 No. 2

The Vertical Merger

THE first official confirmation of the consolidation of the United Drug Company and Sterling Products has come, and as we predicted, the merger will in all probability be complete by the end of the current month. A drug manufacturing and retailing organziation with assets of one hundred and forty million dollars comes into being. True, the company is international in scope, and, therefore, this huge capitalization does not wield its full influence in the American market, but the part assets and activities in foreign countries is so small a percentage of the total, that even with this deducted, the company remains far and away the greatest single factor in the American drug industry from point of size.

MERGERS of the vertical type have long been recognized as a most effective method of eliminating many of the items of cost that are necessary to units operating within a restricted portion of any great industry. Products made by and formerly distributed by Sterling Products find through this combination, a ready market in perhaps twenty per cent. of the retail trade of the country.

ONE fact that makes this type of merger so attractive at the present time is that by combining former competitors, horizontally, companies are likely to run afoul of the Sherman Anti-Trust Law for bringing into one group all the large factors in any particular branch of an industry; but in uniting companies in several branches of one industry, no such risk is taken. Furthermore, the vertical type of combination passes into one channel two or more profits taken at the points where the product would normally pass from one branch of the industry to another. The ability of the vertical unit accurately to determine these profits in advance with far more exactness than independent manufacturers can estimate them, gives the management a closer determination of costs, and consequently of their working margin. In addition, the pooling of these profits gives to this type of operation the additional advantage of power to decrease either of these profits should the occasion arise.

SINCE such consolidations are practical only if they are able to place finished goods in the ultimate consumer's hands at a lower price, should they fail in this one point of economic service they do not justify their existence and will cease to be prominent factors. Also if the independent manufacturers and retailers do not meet the competition of these units, they too, will loose their significance.

TWENTY per cent. of the retail market in this one chain with other chains close behind, indicates that a decision must be reached by manufacturers as to what methods are to be used to increase the flow of goods through these chains, or if the independent retailer will be used for intensive merchandising.

Hands Off

Transfer to the Public Health Service of some of the pure food and drug activities of the Department of Agriculture is proposed in a bill recently brought before a sub-committee of the House Committee on Interstate and Foreign Commerce. Thus another attempt to upset much good work that has been done to enforce the many and various laws which regulate the drug industry is started by someone probably ignorant of the disorder such a step would create.

Administration of the Pure Food and Drugs Act is complicated—to say the least. During the twenty-one years that it has been in force, its provisions have been administered by a single executive department, with minimum changes of personnel, and as Mr. Crounse, of the National Wholesale Druggists' Association and the American Manufacturers of Toilet Articles, recently stressed, this continuous untampered administration has established a series of precedents of great value to the industries which come within its jurisdiction. "To transfer the important functions from the Department of Agriculture to any other department would be certain to demoralize the agency charged with the execution of these laws, and to affect adversely all interests coming within the jurisdiction of these statutes."

A chief difficulty in administering the laws of the country, so as to obtain effective enforcement as well as the co-operation of those regulated, lies in changes in regulations and changes in personnel. The building up of a department to administer such laws as are applicable to drug manufacturers cannot be accomplished over night. Such a change as is contemplated would assuredly bring great confusion that would work hardship on many drug manufacturers who, after many personal conferences with enforcement officials of the administration, would have to go over the ground all over again with new personnel, and in the meantime run into all sorts of snags of misunderstanding and misinterpretation that would eventually react unfavorably both upon the industry and the department charged with these regulatory duties.

Stock Simplification

The first questionaire now being distributed by the Druggists' Research Bureau attacking the problem of stock simplification of toilet goods shows clearly that a complete analysis of the stocks now being carried can be of great value to the independent retailer and consequently to the manufacturer who distributes mainly through the independent stores. The survey made in Philadelphia and New York State prior to the nation-wide survey, brings clearly to light a fact that is generally surmised—that the drug retailer cannot as a general thing employ efficiency in all departments of his business without assistance.

While the results of this preliminary survey are not to be taken as a criterion of the whole country, or even of the complete returns that will be tabulated from Philadelphia and New York State, still they show that there is much to be learned by the druggist in the matter of basing his stocks on his gross sales; what the fastest selling lines are; the number of brands that should be carried. In the matter of tooth pastes alone, which is the fastest selling item, the stores doing sixty dollars per day carry about twenty brands, whereas stores doing one hundred per day carry only twenty-two to twenty-five brands. Furthermore the number of brands of tooth pastes that are not selling vary from ten in the New York State stores doing sixty dollars per day to only six or seven in the stores doing one hundred dollars per day—obviously the smaller store is carrying more dead stock than the larger one.

While the ultimate results of the survey might work to the detriment of certain manufacturers who are not sufficiently aiding the retailer by bearing a larger part of the expense of creating direct consumer demand, the realization that goods are not sold until they are in the user's hands must sooner or later come to those manufacturers who are to move the drug manufacturing industry forward. Progressive manufacturers have long known that it is not enough to stock the druggists' shelves with goods and then think that because of the druggists' investment in the stock, he will see that the goods are sold. What the druggist generally does is to get rid of the goods in the best way he can and thus make more room for goods of the manufacturers who are creating a real demand. The more the manufacturer can make the road easy for the retailer, the more business will come to both.

Essential Oil Outlets

At the present time the great majority of essential oils find their market due to their ability to impart desired odors or desired flavors to the products in which they are compounded. From time to time slight recogni-

tion has been given to the fact that many of these oils possess valuable properties as antiseptics or germicides, but the demand built up on this phase of their usefulness has been very limited indeed. Moist turpentine oil in the sick room of bronchitis patients and cedar oil vapors for the treatment of whooping cough, are only two of these secondary uses of essential oils of long standing; yet there has been no real endeavor to increase either the scope or the number of such uses.

Doubtless a contributing cause of this stagnation lies in the dearth of definite scientific knowledge available on the subject. While several conscientious investigations have been undertaken, some of them are open to criticism both of the methods employed in arriving at conclusions, and of the point of view from which the problem was attacked. It is unfortunate that so much time and effort has been expended on such badly conceived and improperly conducted experiments which can in no way be corelated so as to broaden the knowledge that is available. A thorough understanding of just what virtues as antiseptics the long list of essential oils possess would be of inestimable value to consumers and producers alike. It would immeasurably aid the consumer in justifying the claims made for his finished product, as well as more clearly define to producers the extent to which their products may be utilized in this direction.

As Dr. Kramers points out in this issue essential oils are very complex mixtures and therefore do not lend themselves to direct study. Indeed it is because the oils have been studied as such that the available information is of so little value. It is also unfortunate that the oils have been compared on a basis of their phenol coefficient, when the action of phenol was taken on one germ, and the action of the oil on another.

The antiseptic action of any oil is due to the action of the definite chemical compounds that are present in the oil, and in many oils there are several chemical compounds present in greater or less degree all of which contribute to the net result. Also the action of any chemical compound, or in fact of any oil, toward one germ, cannot accurately be compared with the action of phenol, or the action of any other substance, toward a totally different germ.

The subject is obviously so vital to all concerned with essential oils that it is greatly to be regreted that there is no complete and accurate study to offer an answer to the multitude of questions that constantly arise.

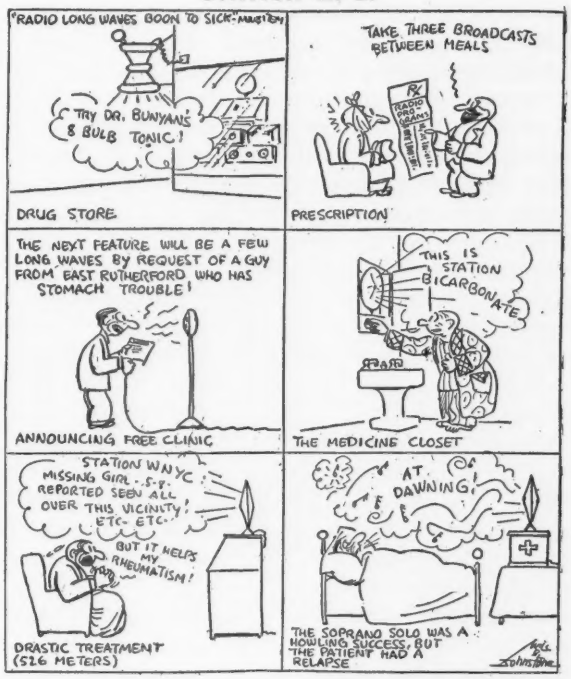
The Effect of Automatic Machinery

Straight line production accomplished by automatic machinery is necessary to meet present day competition in the drug manufacturing industry as in other industries. Also the basic changes that are occurring in the drug industry are in many instances a direct result of this advance. But the extent to which automatic operations are effecting the industry is probably little known and seldom appreciated.

Excess floor space and less labor are the natural result of an automatic straight line production. But excess space and smoother operation gives greater capacity to the plant and executive force that becomes irksome to those seeking greater things. Furthermore, those who have been unable for various reasons to meet this trend, have found themselves outdistanced in low costs and have been unable to understand how competitive goods are sold at quoted prices with any appreciable profit to the producer. Many times this very condition has been the direct cause of the more efficient manufacturer absorbing into its own organization the products of the less efficient concerns.

Perhaps far more reaching in its effect upon the industry as a whole is the manner in which automatic machinery has formed a closer bond between the various groups into which drug manufacturing naturally resolves itself. Several of the more ethical manufacturers

STATION M. D.


RADIO LONG WAVES SOON TO SICK-MASTERS
TRY DR. BUNYANS' 8 BULB TONIC!
DRUG STORE
TAKE THREE BROADCASTS BETWEEN MEALS
Rx
PRESCRIPTION
THE NEXT FEATURE WILL BE A FEW LONG WAVES BY REQUEST OF A GUY FROM EAST RUTHERFORD WHO HAS STOMACH TROUBLE!
ANNOUNCING FREE CLINIC
THIS IS STATION BICARBONATE
THE MEDICINE CLOSET
STATION WNYC: MISSING GIRL - S-T-. REPORTED SEEN ALL OVER THIS VICINITY! ETC- ETC-
BUT IT HELPS MY RHEUMATISM!
DRASTIC TREATMENT (526 METERS)
AT DAWNING!
THE SOPRANO SOLO WAS A HOWLING SUCCESS, BUT THE PATIENT HAD A RELAPSE

—*N. Y. World.*

have within recent years entered more fully into marketing products advertised directly to the consumer, rather than working solely through the physician. Several have also extended their capacity for manufacturing proprietaries under private labels. Tooth pastes, oral antiseptics, shaving creams, and toilet preparations are being exploited to a surprising extent by leading drug manufacturers of the country.

The broadening of the scope of manufacturers to an extent that causes a merging of interests of all types from those who market solely through the physician to those who market only a proprietary, has, and will continue to work for the betterment of the industry. A closer understanding of the problems confronting the various groups will focus the attention of more keen minds on these problems and bring about more unbiased solutions, which should go a long way toward raising the plane of the entire industry and inspire greater confidence in the industry into the minds of those engaged in it as well as in the public who buys.

Much as eliminating deadwood from the line of items manufactured by one concern has been talked about, the trend is decidedly in the other direction—that is more drug manufacturers are adding items to their lines than are discarding them. This is further borne out by the results of a recent survey made by The Sherman Corporation of Boston. In this survey it was found that seventy-two per cent. of the manufacturers reporting had not decreased the number of their items, while fifty-eight per cent. had increased them.

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The request for an export manager for a large drug manufacturing house which comes to us this week, indicates the increasing value of the export trade to manufacturers in this country. While the qualifications are quite high, the willingness of the firm to pay ten thousand dollars to start brings the export department well up among the departments of the company that dictate policies.

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Camphor advances to $1.00 @ $1.05 lb.

Antiseptic Properties of the Volatile Oils

By Dr. Edward Kramers

Director of Pharmacy, University of Wisconsin

Pharmaceutical and toilet goods manufacturers are naturally interested in all research done on the antiseptic properties of essential oils. Dr. Kramers points out that if any commercial advantage is to come from this research it must be directed from the angle of the chemical constituents of the oils, rather than from a study of the complex oils themselves.

VOLATILE oils are usually thought of as a class. They are to be considered as a class only in so far as they are obtained, for the most part, by the process of steam distillation, hence represent those constituents of plants or parts of plants that are volatile, either with water vapor alone or with mixed vapors resulting from the process of distillation. Moreover, and again for the most part, they represent those volatile constituents of plants that do not remain dissolved in water when the mixed vapors are condensed by cooling.

Chemically speaking they are even less of a class than the fatty oils which, so far as the largest percentage of their constituents are concerned, are glycerol esters of fatty acids, whatever that may mean. But even when widely interpreted, whether simple esters or mixed esters, the bulk of the constituents of fatty oils belong to one type of chemical compounds. True, in recent years, vitamine studies have imparted a peculiar significance to certain minor constituents, minor in the quantitative sense. However, aside from the so-called non-saponifiable constituents, the chemistry of the fatty oils is largely a study of their fatty acids.

In the case of the volatile oils, the situation is very different indeed. Hydrocarbons play an important role, not only quantitatively, but, as we are beginning to learn more and more, in other respects as well. Of oxygenated constituents, there are alcohols, aldehydes, ketones, acids, esters, hydroxy acids, lactones, oxides, not to emphasize peroxides in this connection. In addition there are sulfur derivatives and nitrogen derivatives, also compounds containing both sulfur and nitrogen.

The properties of a substance, whether physical, chemical or physiological, are functions of its structure, be that substance elemental or compound. How then can we refer to the volatile oils as a physiological group any more than as a physical group? Not long ago the writer received a request from a physician for Jeffrey pine oil which he thought worth while investigating as a remedy for phthysis because it had the lowest density of any volatile oil known. What connection there may be between density and the bactericidal property of compounds the writer has still to learn. Why an oil that consists to the extent of 98 per cent. of a completely saturated hydrocarbon,

The cultivation of violets covers large territory in the vicinity of Grasse, France. The above illustration gives an idea of the extent of the cultivation of this flower for oil, and shows the workers who are mostly of Italian extraction.

have within recent years entered more fully into marketing products advertised directly to the consumer, rather than working solely through the physician. Several have also extended their capacity for manufacturing proprietaries under private labels. Tooth pastes, oral antiseptics, shaving creams, and toilet preparations are being exploited to a surprising extent by leading drug manufacturers of the country.

The broadening of the scope of manufacturers to an extent that causes a merging of interests of all types from those who market solely through the physician to those who market only a proprietary, has, and will continue to work for the betterment of the industry. A closer understanding of the problems confronting the various groups will focus the attention of more keen minds on these problems and bring about more unbiased solutions, which should go a long way toward raising the plane of the entire industry and inspire greater confidence in the industry into the minds of those engaged in it as well as in the public who buys.

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Showing the charging room in a steam distillation essential oil plant with the workers opening the chargers for a new batch of flowers. This room is located above the distillery.

viz. n-heptone, should have properties that might make it of value in the battle against tuberculosis is still a mystery. The mere name volatile oil evidently suggested bactericidal properties and the low density presumably suggested added qualities of merit. Having informed the therapeutic investigator of the composition of Jeffrey pine oil, the writer has not heard from him again.

Rose oil certainly constitutes a delicate perfume, yet one of its constituents, also a paraffin hydrocarbon or rather a mixture of hydrocarbons of the methane series is as valueless as a perfume as a paraffin candle, for, when pure, it has no odor. Yet rose oil was for a long time evaluated by its steraroptene content. This enabled the shrewd sophisticator not only to adulterate his oil of rose with oil of rose geranium, but to give it the semblance of a very good genuine oil by adding spermaceti which crystallized out beautifully when the oil was cooled in order to prove its excellent quality.

Just as the stearoptene of oil of rose was thought to be a meritorious constituent until its chemical character was revealed, so all stearoptenes were for a long time looked upon as representing the therapeutic value of a volatile oil. Thus mentha camphor, the stearoptene of peppermint oil, now commonly designated menthol, was regarded as the therapeutically important constituent of the oil of Mentha piperita. When volatile oils did not separate their oxygenated constituents in solid form on cooling or prolonged standing the "liquid" stearoptenes—a misnomer in itself—were assumed to represent the therapeutic value of a given oil. An illustration may be had in the cineol or eucalyptol of the oil of eucalyptus which was and still is evaluated according to cineol content.

The confectioner, however, knows that menthol is not the only important constituent of peppermint oil. While the manufacturer of menthol prefers the cheaper Japmint oil because of its high free menthol content, the confectioner pays a higher price for an oil much poorer in menthol but which contains menthol esters.

The same logic which proclaimed all stearoptenes to represent the therapeutic value of a volatile oil, for the reason that e. g. thymol was an important constituent of oil of thyme, naturally assumed that the antiseptic properties of the volatile oils were due to their oxygenated constituents. The hydrocarbons, for the most part, were regarded as mere dilutens of little or no physiological value. This in spite of the fact that turpentine oil was being used, not only externally as liniment, but internally in the form of an emulsion.

The first shock that brought a rude awakening in this respect, seems to have come from an Australian physician who claimed that phellandrene, a hydrocarbon $C_{10}H_{16}$, possessed greater antiseptic value than the eucalyptol or cineol. The eucalyptus oils rich in phellandrene had been barred from the pharmacopoeias and the oils rich in cineol and poor in hydrocarbon had received pharmacopoeial recognition everywhere.

Now, few volatile oils contain more than traces of hydrocarbons of the methane series which, in the language of the organic chemist, are saturated, hence chemically indifferent to many reagents and hence, by inference, therapeutically indifferent as well. Most of the hydrocarbons found in volatile oils belong to the terpene ($C_{10}H_{16}$) or sesquiterpene ($C_{15}H_{24}$) groups. There are others with ten and fifteen carbon atoms but with more or less hydrogen than these better known hydrocarbons. An instance is azulene, $C_{15}H_{18}$ the blue hydrocarbon of milfoil oil and other blue oils. This substance, of which pharmacologists thought little simply because it was a hydrocarbon, has proven

A steam distillation essential oil plant in Grasse, France. The man on the right is in front of the apparatus for extracting the water from the oil. The oil is lighter than the water and floats on top.

to have decided physiological action, the chemistry of which has not yet been studied.

So far as the terpenes are concerned, we have at least a chemical explanation of their reported bactericidal action. In a general sense the older designation terpene applies to hydrocarbons $C_{10}H_{16}$ which come under the formula of saturation Cn_2Hn_{-4}. They have six hydrogen atoms—three pairs—less than the corresponding limit hydrocarbons $C_{10}H_{22}$. In place of these three pairs of hydrogen atoms they have as structural equivalents either 1. three double bonds, 2. two double bonds and a cycle, 3. a double bond and two cycles, 4. three cycles. Additional structural equivalents are a treble bond and a double bond, or a treble bond and a cycle. Those terpenes with either two double bonds and a cycle, or one double bond and two cycles are best known at present. a-and-b-pinene, belong to the former group; limonene, the phellandrenes, the terpinenes, etc. belong to the second group.

Since the work of Engler and others, it has been well known that these terpenes readily take on oxygen from the air forming unstable peroxides. These in turn gradually change to more stable oxygen compounds. Because of their lability they naturally would be expected to be good germicides. So far as the peroxides of pinene, limonene and phellandrene are concerned, it has been shown that their germicidal action increases with their peroxide content. Thus a scientific explanation has been given to the observation made by the Australian physician that phellandrene is more active as germicide than is cineol. Since then ascaridol, a naturally occurring somewhat more stable peroxide in wormseed oil, has come into use as a specific vermifuge. We can now understand why the terpenes, through their peroxides, are bound to play a more important role as therapeutic agents in the future, possibly even more important than the better known "active" oxygenated constituents of the volatile oils which have heretofore largely monopolized the field as therapeutic agents. What has been said of the terpenes applies to the sesquiterpenes as well. Indeed, the peculiar toxic properties of poison ivy may be explained, at least hypothetically, by assuming the formation of peroxides as an intermediate unstable compound in their oxidation to resin.

While endeavoring to correct older ideas based on an insufficient understanding of the subject, the writer has no desire whatever to question the germicidal value of many of the older stearoptenes or similar oxygenated substances occurring in volatile oils. The germicidal action of thymol and its isomer, carvacrol, is so well known that it does not call for comment. This applies also to other phenols found in volatile oils. It applies also to such substances as salicylic acid and its ester both of which are phenol as well as acid and ester respectively.

The germicidal action of such substances as benzaldehyde and cinnamic aldehyde is also too well known to call for special comment. Moreover, both aldehydes are readily oxidized to the respective acids which likewise are germicidal. Indeed, the volatile

(Continued on page 177)

Lavender flowers are now among the principal cultivated crops in Grasse, France. The above shows a typical lavender plantation in the Grasse district, and indicates the extent of this industry.

Alcohol Under

The Doran Plan

WITH alcohol restriction now in effect under the plan inaugurated by Dr. James M. Doran, Commissioner of Prohibition, alcohol consumers not fully acquainted with the plan are showing concern as to future supplies and future prices for this necessary raw material. The quantity of alcohol to be produced in all plants during the calendar year 1928 is fixed at 85,000,000 gallons. This is 6,000,000 gallons less than production during 1927 when slightly over 91,000,000 gallons were produced. Thus at first glance it would appear that either the illigimate flow of alcohol will be definitely checked or else consumers will face a shortage. But in addition to the 85,000,000 gallons fixed for manufacture, stocks not in excess of 10 per cent. of the quota may be carried over by manufacturers, adding 8,500,000 gallons to the quota, and making a total of 93,500,000 gallons actually available should demand run that high. Therefore, the alcohol available for consumption this year will be about 2,000,000 gallon greater than production during 1927.

DR. JAMES M. DORAN
Commissioner of Prohibition

The fact that manufacturers are allowed to produce only 40 per cent. of the quota, or 34,000,000 gallons, during the first six months of the year should not make alcohol especially tight during this period. With the stocks on hand, 42,500,000 gallons, or one half of the quota, will be available . Also the first half of the year is normally the time of slack production schedules as the stocks for the heavy anti-freeze demand are manufactured during the Summer and Fall.

Two major objectives are in the minds of Government officials in adopting this plan, according to Dr. Doran, first, to protect the Government's interest by eliminating surplus alcohol, that overtaxes the enforcement machinery from the market and secondly to conserve and protect the lawful and essential alcohol industry. As a necessary corollary to the last statement, Dr. Doran points out that a fair and just treatment of the consuming trades is the very essence of well-being of the producers, and, therefore, the last major objective to be attained encompasses the entire alcohol producing and consuming interests.

While a consumer at first thought will assume that restricted production will naturally lead to higher prices, Dr. Doran recently stated that there is no occasion for consumers to feel any apprehension with regard to future supply of alcohol or the price that will be paid. In isolated instances certain distilling interests and some of their customers have sought to take advantage of the allocation plan to raise the price of alcohol and its products; but these people have since been induced to give the matter a second thought as a result of which they have given assurance to support the plan and to maintain the price standards in force before the plan was adopted. Certain of the largest alcohol producers have promised that for 1928 they will sell to any legitimate consumer all the alcohol he wants without any price increase, and it has been promised to these producers that their quotas will be increased by any amount they might need to take care of such increased business.

In line with this same thought officials of certain producers recently stated to a representative of DRUG MARKETS that in their opinion a stable market for alcohol would be more acceptable to both producers and consumers of alcohol than a fluctuating one. In other words they presume that, with the exception of the personal pride of some purchasing agents who are always on the lookout to prove their efficiency, consumers would rather pay the same price over a long period provided they are certain they are paying no more than their competitors. This would allow them to more definitely determine their costs, and consequently their profits, far in advance.

However, a stable price over a long period is difficult to obtain in a product with a fluctuating raw material. Molasses has fluctuated in the past and doubtless will fluctuate in the future. In fact alcohol manufacturers have forecast their action under such conditions in Dr. Doran's statement as follows:

"The Alcohol Manufacturers' Association has, through its officers, expressed the opinion that there will be no increase in prices on account of our control policy. Certain individual manufacturers have gone further than that and have stated that their companies will not for any reason increase prices over the current prices of the last few months, which were in effect before the control policy was put forward, but are still hopeful that the raw material situation will bring about a condition where any future change will be towards lower prices. I am quite sensible of the fact that the Bureau of Prohibition is not, and cannot be, concerned in prices, but inasmuch as we are profoundly concerned in the welfare and stability of the alcohol consuming and producing trades, it is essential that complete assurance be given the consumers on this point."

Plan Should Work

Apparently from the point of view of Dr. Doran there is no reason why the plan should not work to the complete satisfaction of legitimate producers and consumers. The Commissioner has stated that, despite the fact that many consider the control of production of any commodity as economically unsound, it is not safe to reject a control theory with a wave of the hand when some of the biggest industrial leaders and officials of the country are giving this subject serious attention.

The authority for the adoption of this restriction by the Prohibition Department comes from Section 13, of Title III of the National Prohibition Act, which confers very broad powers on the Commissioner to promulgate, with approval of the Secretary of the Treasury, such regulations, from time to time, as will adequately protect the Government interest and secure maximum scientific and commercial efficiency consistent with that interest. But this section also provides that an adequate supply of alcohol for all industrial purposes shall be available and that the use of alcohol for lawful purposes shall be promoted.

{ *Price List Changes* }

Item	Unit	Now	Was
The Brander Company, Inc., New York..			
N—Pyor-Heal, 2 oz., retails 35c	doz.	$ 2.80	
8 oz., retails $1.00	doz.	8.00	
Ellsworth Laboratory, Syracuse, N. Y.			
A—Pill, Rose Buds, retails 35c	doz.	3.00	2.25
Howell Drug Company, Silver City, N. M.			
N—Yucca Blossom Cream, retails 50c	doz.	4.00	
Jaster-Wilcox, Co., Cleveland, Ohio.			
C—Shaf-Mey Healing Ointment for Piles	doz.	8.00	
C—Shaf-Mey Healing Ointment for Eczema	doz.	8.00	
C—Shaf-Mey Foot Powder	doz.	4.00	
(Shaf-Mey Products recently taken over from Chester Meyers Co.)			
The Kells Company, Newburgh, N. Y.			
A—Hurlburt's Rubini Camphor Pills, retails 35c	doz.	2.50	2.10
(New style package)			
Park Pharmacy, Charleston, S. C.			
D—Hummel's Carbolated Lycozine, retails 35c	doz.	2.80	3.00
Rhu-Nix Company, Cleveland, Ohio.			
N—Rhu-Nix, retails $1.50	doz.	12.00	
N—Rhu-Nix-Rub, retails 60c	doz.	4.80	
L. E. Scott Co., Inc., Southington, Conn.			
Lesco Cleaning Fluid, 4 oz., retails 30c	doz.	2.25	
14 oz. cans, retails 60c	doz.	4.50	
32 oz. cans, retails $1.25	doz.	10.00	
Sharp & Dohme, Baltimore, Md.			
N—Hexylresorcinol Solution, S. T. 37, ½ oz. applicator bottles	doz.	2.25	
Vasco Products, Brentwood, Md.			
N—Vasco Powder Shampoo, retails 25c	doz.	2.00	
C—Mike Martin's Liniment, small, retails 35c	DISCONTINUED		
(No change in other sizes)			
C—Gilbert's Laxative Tablets	DISCONTINUED		
Buffington's Inc., Worcester, Mass.			
Ceratol, tubes, retails 50c	doz.	4.00	
Cocesin Lozenges, 100's, retails 75c	doz.	5.00	
Eucazest, retails 50c	doz.	3.00	
Gezol, pts., retails $3.00	doz.	30.00	
Hy-Drio-Din, pts., retails $1.25	doz.	9.00	
Vaginettes, retails $1.50	doz.	12.00	
Orchohgene, 100's, retails $1.50	doz.	12.00	
Ovogene, 100's, retails $1.50	doz.	12.00	
Pyle's Embrocation, retails 50c	doz.	3.00	
Eimer & Amend, New York.			
D—Neutralon	doz.	10.00	12.00
A. O. Leonard, Inc., New York.			
A—Leonard's Ear Oil	doz.	9.00	8.00
Merck & Co., New York.			
N—Azamine, Powder, 15 gr. vials	each	1.30	
N—Azamine, Ampuls, 12's	each	4.50	
N—Azamine Mouth Wash, oz.	doz.	10.00	

Federal Narcotics Control Board holds regular semi-annual meeting Feb. 1, and revises 1927-28 quotas for importation of narcotic drugs. Quota for present year was enlarged so that total is slightly greater than that set at beginning of fiscal year last July, but still below that of preceding fiscal year.

Revised regulations under narcotic drugs import and export act which were to become effective February 1, will take effect April 1, and regulations be available in printed form before that date.

United Drug Company

founded

Twenty-five Years Ago

by

Louis K. Liggett

Louis K. Liggett—born fifty-two years ago in Detroit—the man who as a salesman for "Vinol" at the age of twenty-six persuaded forty druggists to subscribe $4,000 each to a company to be headed by himself.

A MAN was addressing a group of forty of his friends who had gathered together in the Drug Club in New York. It was 1902, the man was Louis K. Liggett, and the forty were retail druggists who had come to this luncheon at his invitation. He was unfolding a prospectus of the United Drug Co. F. B. Rogers, who, with James J. Brady and C. F. Bucholtz, are three of the original forty who still actively share in the management of the United Drug Company as directors, describes the scene as follows. "It was purely a paper proposition at that time; but so carefully thought out, that his word picture presented to our minds' eyes a factory teeming with United Drug Company employees busy producing Rexall goods—and yet there wasn't anything tangible except a box of Rexall Dyspepsia Tablets. How we munched those tablets—what part they may have played in the digestion of that enjoyable lunch will always be problematical. I went to look and listen, and came back a subscriber, much to the disgust of my good Dad who felt that I had been too impulsive." Inspired by the ideas of this man, each one of the forty had invested $4,000, giving the company its original capital of $160,000.

The first bill of goods was shipped from a small leased building on Leon Street, Boston, March 13, 1903, at which time the company employed only fourteen workers, and occupied but 30,000 feet of floor space. It was so hard to find that building in Boston that Mr. Liggett finally issued a printed direction slip to the stockholders. This informed them that the best way to reach the factory was to get off at Back Bay Station, walk to the corner, grab the first cow by the tail, follow her through the highways and by-ways until reaching the city limits where someone would be waiting to lead them to the building

In reminiscing about those early days, Mr. Rogers writes "what a job it was to fill that little factory with activities on the occasion of the first stockholders' meeting—what pride we took in the appearance of Sergeant Chubb in his trim, natty, unique uniform. How we watched for the little soldiers in our local advertising, who appeared one by one on successive days until they had finally spelled out the word "Rexall." How some of us held our breaths when Mr. Liggett read the first year's annual statement, which showed that the first year's operations had not been a howling success." The company's business during that first year totalled only $65,000, but by October, 1904, the company was on a profitable basis. A year later, in September 1905, it employed 300 people, and United Drug Co. products were being distributed through 1,000 Rexall stores.

The First Retail Store

Meanwhile, the first Liggett store in New York had made its appearance—the McAlpin store which people predicted would be a white elephant and which trade papers discussed as being a spectacular advertising proposition rather than a business getter. Mr. Rogers again takes up the story. "The day that contract (the McAlpin store) was signed, when we

thought we had done a pretty good day's work, Mr. Liggett suggested that the Executive Committee go over to the Grand Central Station and look at a location in that structure with the idea of putting in another store. It was just a shell—there were no floors, there were no partitions, the window and door openings were boarded up. I damn near broke my neck and barked the leather off my shoes, crawling around and over the reinforcing steel that was lying helter-skelter around the place. It didn't seem as though it would ever be a finished building, let alone a completed drug store; and yet Mr. Liggett pictured a Liggett drug store, and it was not long before we were committed to that too".

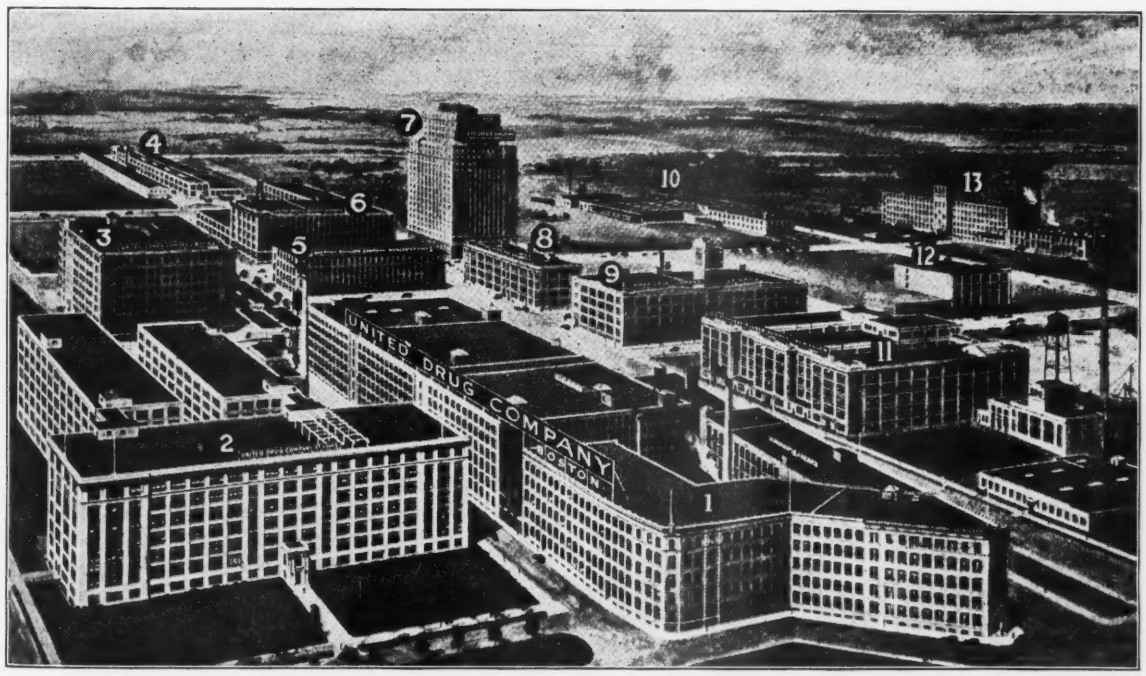
Hall-Lyon Name Discarded

"Perhaps few know that Mr. Liggett had selected the name of "Hall-Lyon" as the name under which the retail stores should operate. On the train to Boston one day it struck me that the Hall-Lyon name, while valuable in New England, would be a new name to New York, and we might just as well advertise a personality as a company. I got Jim Brady and Byron Hyde in my room and we agreed that the word Liggett would lend itself to better corporations advertising and to better publicity than would a company name, but it took a lot of persuasion and argument before Mr. Liggett consented to adopt "Liggett" as the retail name."

F. B. Rogers, one of the three original stockholders who are now actively engaged in directing the Company.

George J. Gales, First Vice-president and General Manager of United Drug Company, and President of L. K. Liggett Company.

When the company was originally formed there was no such thought of invading the retail field. Rexall agencies, 10,000 of which exist to-day, operated by stockholders, were thought sufficient for retail representation. It was purely the rapid growth of the company and the desire on the part of the management to be properly represented in metropolitan centers that forced the company into the retail business. By acquiring the Hall-Lyon Company of Providence, the Jaynes Company of Boston and the Riker-Hegemann Company of New York, the retail business grew and developed into the present Louis



Composite picture showing the various plants and other buildings of United Drug Company. 1. Laboratories and Administration Building, Boston. 2. Southwestern Plant, St. Louis. 3. Liggett's Candy Factory, Boston. 4. Pure Food Plant, Highland, N. Y. 5. Sherman Envelope Factory, Worcester, Mass. 6. United Drug Company, Ltd., Toronto, Canada. 7. Liggett's Administration Building New York. 8. Marcus-Ward Stationery Plant, New York. 9. Western Branch, Chicago. 10. Absorbent Cotton Company of America, Valley Park, Mo. 11. Seamless Rubber Company, New Haven, Conn. 12. Pacific Coast Plant, San Francisco, Cal. 13. Chocolate Refiners, Inc., Mansfield, Mass.

K. Liggett Company, which has been such a great help to the parent company in the proper marketing of its products.

The idea behind the original formation of the project and the foundation of the company's business was the manufacture and sale of medicines. Subsequently many other varied lines of manufacture were successfully undertaken, but the company's drug laboratories grew with the company. To-day they have an output of one ton of tooth paste per day. Total production of various ointments during 1926 was 300,000 pounds, or an average of 1,000 pounds per working day. Approximately 20,000,000 pints of trailer items were produced during 1926. The Pharmaceutical Department, which began production in 1913 has steadily grown until in 1926 the output exceeded four million pints. A Drugs and Chemicals Department, whose products are known by the familiar "Puretest" trademark, was established in 1919, and by 1926, production in this line alone reached a total of well over 25 million packages. Production of pills and tablets during the last few years increased to over six hundred and thirty million a year. Twenty-four inspection operations are required from the receipt of raw material to the delivery of the finished product, which has now reached sixty million packages a year.

Closely allied with the work of the laboratories is that of the Formula Committee and the Research and Analytical Department. The former serves as a planning board to devise and control all formulas. The latter department analyzes and inspects raw materials, finished products and warehouse stocks; investigates complaints; and conducts original research and investigation. A technical conference is held annually. The personnel of the 1927 conference was: C. G. Duggan, chief chemist, St. Louis; N. C. Earl, director of laboratories, Boston; Prof. G. A. Evans, chief chemist, Toronto; C. O. Ewing, assistant chief chemist, Boston; F. J. Hailer, purchasing staff, Liggett Co., New York; A. B. Kent, chief pharmacist, Liggett Co., New York; Dr. J. L. Mayer, chief chemist, Liggett Co., New York; E. C. Merrill, chief chemist, United Drug Co., Boston; Dr. J. F. Morrison, chairman, Formula Committee, Boston.

Toilet Goods Manufactured

To return once more to the early days of the company—among the first of the allied departments to be established was the Toilet Goods Department in 1905. At that time, the organization consisted of four people and occupied 6,000 square feet of space. From this modest beginning the department progressed until in 1917 it occupied four floors with 25,000 square feet, and was capable of producing from three to four million packages per year, the four floors being those in the old ivy-covered thread factory which originally had sufficed for the entire United Drug Company. In 1919, the steady progress of this department necessitated not only larger quarters, but the addition of new equipment. Sixty thousand feet of floor space was taken over for the exclusive manufacture of toilet preparations and the capacity was brought up to 12,000,000 packages per year. In 1925, it was decided to put a perfume department in the St. Louis plant in order to relieve pressure on the Boston plant and also to manufacture goods for the Chicago and St. Louis territory. Production there at the present time amounts to over 3,000,000 pieces a year, bringing total production of the company to 15,000,000 pieces a year. The Perfume Department of the United Drug Company to-day is thus among the largest in the world and ranks as the largest department of the company.

Following close upon the establishment of the Perfume Department, was the organization in September, 1905, by Mr. Liggett of the National Cigar Stands Company, which enables Rexall agents to buy and sell tobacco products on a money-saving, profit-making basis. The first big era of expansion was the construction of the branch warehouse in Chicago in February, 1906. In November, 1908, Mr. Liggett organized what is now known as the United Mutual Fire Insurance Company to insure Rexall agents' property, on a saving basis.

More Units Added

Then followed a period of ever-increasing expansion. In response to the insistent demand of Canadian druggists for Rexall merchandise, a large manufacturing plant was established in Toronto on December 2, 1909. The present plant at that location has been expanded to four times its original size. In 1910, the Boston Laboratories were again enlarged and in that same year the Stationery Department and the Pure Food and Fountain Supplies Department were established. This latter department was inaugurated by the company's purchase of the F. L. Daggett Company, Boston. By October, 1911, the candy business, founded early in the company's history, had grown to such enormous proportions as to necessitate the building of the present eight-story Liggett Candy factory in Boston.

A branch warehouse was established in St. Louis in 1911. Through constant expansion, that plant, the Southwestern Plant of the company, is the largest drug manufactory in the world. It employs 1,300 people and embraces three departments—medicine, candy and toilet goods. It operates its own print shop and makes all its own cartons and boxes. In the year just gone by, it produced over 18,000,000 packages of laboratory production, over 7,500,000 pounds of candy, 6,000,000 packages of toilet goods, in company with the cartons and boxes accompanying this volume of business.

Branch in Liverpool

In 1912 a branch was opened in Liverpool, England which has recently been replaced by large laboratories in Nottingham which supply United Drug Company

products to over 1,000 Rexall chemists, operating 1,500 exclusive agencies throughout the United Kingdom. In the same year, further additions were made to the Boston laboratories and a Rubber Department established, from which has since developed the Hospital Department. At the present time the company owns and operates the Seamless Rubber Company, New Haven, one of the largest manufactories of druggists' rubber sundries in the United States. This plant, which replaced the property of the original Seamless Rubber Company, employs over 1,500 people, has a capacity of over $7,000,000 worth of rubber goods a year, and produces all the rubber items sold by Liggett and Rexall stores.

The company's expansion was accelerated in 1913 by the acquisition of the importing business of Deitsch Brothers, brush manufacturers, whose properties and trade-marks form the basis of the present Brush Department which is operated jointly with the Sundries Department, established in 1920.

Riker-Hegemann Acquired

In March, 1916, came the so-called "Liggett-Riker consolidation" and in 1920, the formation by Mr. Liggett of Liggett's International Ltd., Inc., which acquired all properties, formulas and trade-marks of the Boots Pure Drug Company of England, operating large manufacturing plants and conducting 630 retail drug stores in the British Isles. Liggett's International Ltd., Inc., the entire voting stock of which was owned by the United Drug Company, and included, in addition to the Boots stores, all the United Drug Company's former Canadian and English interests and did a business then of $40,000,000 annually, has since been included in the parent company and does a business to-day of approximately $60,000,000 annually.

The United Drug Company was founded in 1902 with forty stockholders, $160,000 capital, fourteen employees, 30,000 feet of floor space and did a business in the first year of $65,000. To-day the company has capital of $70,600,000, laboratories, factories and warehouses in both hemispheres, more than 12,000 employees, and a business which in 1926 aggregated $91,183,162, exclusive of English and Canadian companies. It owns outright the properties, formulas and trademarks of Louis K. Liggett Co., operating 459 retail stores in metropolitan centers; Seamless Rubber Co., New Haven; National Cigar Stands Co.; Hudson Valley Pure Food Co.; United Writing Paper Co.; Marcus Ward Stationery Co.; Sherman Envelope Co.; and Absorbent Cotton Co. of America.

"The little brick factory has been added to and built around," to resume Mr. Rogers' story, "until it is lost in the present tremendous plant. Only last month I got lost in the factory and had to have somebody help me get back to the executive building. Unit after unit has been added and yet but two years ago we were omitting more dollars worth of shipments daily than we sold per month in the early days. Contrast one McAlpin store in New York and the Hall-Lyon stores in Providence with the present Liggett chain whose nucleus they were; the original Drug Company plant with the immense institutions on this continent and in England; contrast the volume of to-day with that of the strenuous days at the beginning of the business; and then look ahead an equal length of time and what does the future hold?" His question must remain unanswered for the future itself to decide. The next step has already been made evident with the announcement of the company's merger with Sterling Products, Inc. The possibilities opening up beyond that step seem almost beyond the compass of human achievement. But the eventual realization of these possibilities is evident, when the panorama of the United Drug Company of to-day is compared with that picture of a man addressing a group of forty in the Drug Club back in 1902.

Wholesaler Should Push Botanicals

By Herbert R. McIlvaine

I READ with great interest the splendid unsigned article in the N. W. D. A. Bulletin No. 144, dated November 30th, 1927, entitled "On the Handling of Botanicals."

The writer of this article has brought out very clearly many excellent points. The service jobber is not rendering the proper service to his customers if he cannot supply the crude and milled drugs that are regularly called for and on which he will make a very good profit; but, on the other hand, he, in the majority of cases, will supply his customers with this or that patent medicine on which the profit, I have been told, is very small or neglible.

There are numerous articles in the crude botanical market that are staple. It is true that in certain parts of the United States there is very little call for some articles, while in other parts there is a good all year round call for these articles. There are also many seasonable items, but in the twelve month period the jobber who does not cater to this trade all the time is losing profitable business.

But, after all, why are the jobbers' salesmen not given more encouragement by their employers to push the sales of botanicals? It would appear that the main reason is they have not stopped to figure out accurately which are their profitable departments and which are not. They probably take their entire business as a whole and do not attempt to figure the various departments. Therefore, the large volume of certain departments on the surface looks profitable, but if they would stop to figure and make a careful study of what is profitable and what is not, they would realize the importance of developing their botanical drug department, for by so doing would find that it is not good business to allot many square feet of valuable floor space for merchandise that yields little or no profit.

Increasing the strength of TIN TUBES *by redistributing the tin*

Buyers know that in purchsing tin tubes the raw material is the largest single factor in determining the price. Therefore this method of obtaining increased strength in the tube without any additional tin should prove of interest. Also the method which Bristol-Myers Company uses to investigate tin tubes on the basis of pound gross hydrostatic test should invite discussion.

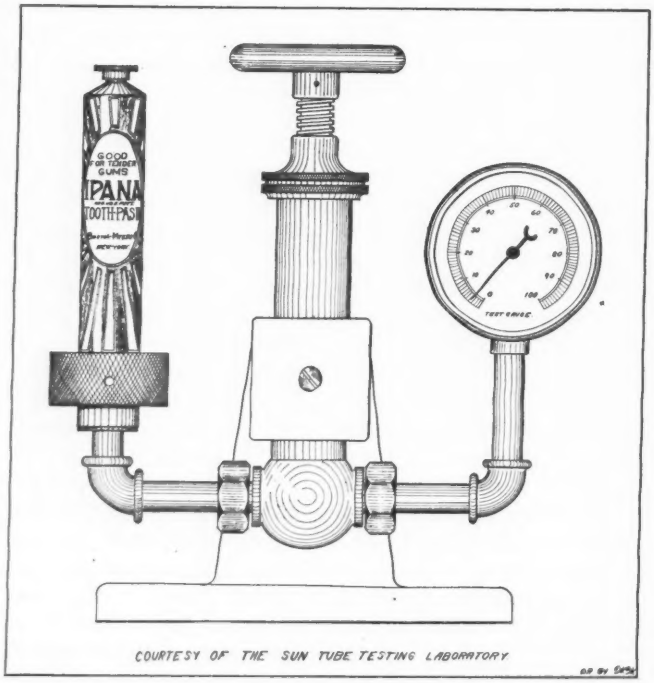
THE strength of a tin tube, that is its resistance to pressure and manipulation such as it would meet in the hands of the user, would at first thought be supposed to depend entirely upon the quantity of tin in the tube. It would naturally be thought that the distribution of the tin throughout the tube would be such that the thickness would be fairly uniform except for certain parts that need additional strength due to the part they play in supporting the tube as a whole.

However some interesting developments have come to light in the tubes used by Bristol-Meyers Company, whose plant was visited in an effort to determine the standards that this company places on its tube purchases as to strength. In an interview with William M. Springer, Director of Research of that company it was learned, that a change in the distribution of the tin throughout the tube, from the distribution commonly employed, has been made in the tubes that this company buys. This has resulted in a sharp increase in the strength of the tube, although the tube weight, and therefore the cost, remains unchanged.

In order that the Company could accurately determine whether or not they obtain would additional tube strength in a change in distribution of the tin, proper tests had to be devised. For a study of the pressure resistance of a tube, the bursting pressure by means of hydrostatic pressure was used.

The apparatus for the bursting is shown in the accompanying illustration. It consists merely of a gauge testing apparatus with the tube fastened by means of a chuck in the place where the gauge to be tested is ordinarily placed. In this manner the pressure is applied through the open end of the tube by screwing down on the screw pump. This increases the pressure on the water which fills the system.

For ordinary testing the attempt was made to apply the



The above apparatus is used in applying the hydrostatic pressure test to tubes. The tube is fastened by means of a chuck, and the handle is screwed down increasing the pressure on the water in the system. The readings are made from the gauge. A nipple with a female thread the same size and pitch as the cap end of the tube, can be used instead of the chuck in testing the strength of clips.

pressure in a manner similar to that employed by the average user—that is—practically instantaneously. Under the circumstances it is possible pressures as high as 75 to 80 pounds per square inch before lateral splitting of the tube begins.

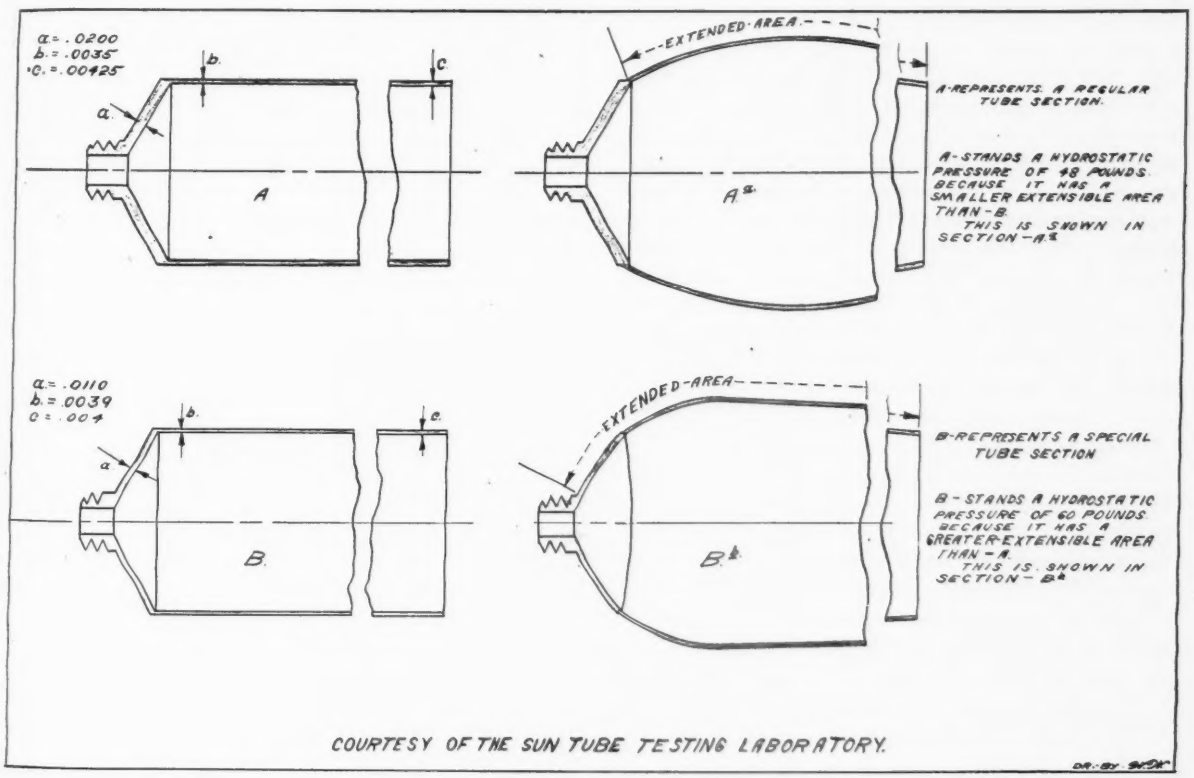
In studying the strength of containers made of tin, it must be remembered that this metal has no true elastic limit—at least Hook's law is not followed very well. It is, therefore, necessary to consider the rate of application of the stress.

In Burr's "Strength and Elasticity of Materials of Engineering" there is given a formula for thin hollow cylinders under pressure. In this formula the intensity of stress in the walls of the cylinder tending to split the tube apart on a diametrical section with given internal pressure, is given by the product of the internal pressure per square inch and the mean radius of the tube, divided by the wall thickness. Burr points out the lack of uniform behaviour under stress of such ductile metals as tin. In fact Young's modulus gives varying values with varying stresses—in other words, Hook's law is not followed. With a fair average ultimate tensile strength of 5,000 pounds per square inch, a tube radius of 0.5 inches, and a tube thickness of 0.005 inches, the bursting limit should be about 50 pounds per square inch. With tubes of less wall thickness, the stress in the material will be higher and rupture will take place earlier. However, in applying this formula to tube rupture, it is necessary to consider the above mentioned anomalous behaviour of a ductile metal resulting in, with a slow application of pressure, diminishing of the wall thickness until rupture takes place at a very much lower pressure. In fact with very slow pressure application, an uncoated tube will hardly stand more than a permanent pressure of 15 to 20 pounds per square inch.

From the accompanying drawings it can be seen that the distribution of the tin throughout tube "A", the tube formerly used by Bristol-Meyers Company, and in fact quite commonly used to-day, gives a thickness in the shoulder of the tube of .020 inches; in the side wall close to the shoulder .0035 inches; and in the side wall near the clip end .00425 inches.

In the tube marked "B", which is the tube now used by Bristol-Meyers, the thickness in the shoulder is reduced to .011 (almost half of the other tube), while the thickness of the side wall is increased 11 per cent. to .0039 inches at the shoulder, and decreased to .004 inches at the clip end. In other words the side wall of the second tube is practically uniform in thickness, varying only .0001 inches in its entire length. There is no more tin in the second tube than there is in the first, in fact there happens to be slightly less.

However, when this second tube is placed under the hydrostatic test it withstands a pressure of 60


a = .0200
b = .0035
c = .00425
b
c
a
A
EXTENDED AREA
A REPRESENTS A REGULAR TUBE SECTION.
A - STANDS A HYDROSTATIC PRESSURE OF 48 POUNDS BECAUSE IT HAS A SMALLER EXTENSIBLE AREA THAN - B.
THIS IS SHOWN IN SECTION - A
a = .0110
b = .0039
c = .004
B
EXTENDED AREA
B REPRESENTS A SPECIAL TUBE SECTION
B - STANDS A HYDROSTATIC PRESSURE OF 60 POUNDS BECAUSE IT HAS A GREATER EXTENSIBLE AREA THAN - A.
THIS IS SHOWN IN SECTION - B
COURTESY OF THE SUN TUBE TESTING LABORATORY.

"A" is the commonly employed tube, and "Aa" is the same tube under pressure. "B" is the Bristol-Meyers "Ipana" tube, and "Bb" is that tube under pressure. As can be seen, the cutting of the thickness of the shoulder of the tube to almost half results in a greater extensible area resisting the pressure, resulting in a much higher resistance to pressure.

pounds per square inch as a minimum, against a pressure of 46 pounds per square inch for the first tube. This amounts to a gain in pressure of 30 per cent.

The reason given for this increased strength of tube carrying the same amount of tin, lies in the fact that the area of the second tube expanding under pressure is greater than that of the first tube. In other words, with the more rigid shoulder, the expansion begins below the shoulder and runs to the end of the tube. The drawing "Aa" showing examination under test shows the condition of the tube when the pressure is applied.

On the other hand, the tube with the thinner shoulder starts to expand at the neck and the expanding area, includes the shoulder the tube taking the form shown as "Bb" in the drawing. Naturally with a greater area working as a unit, a greater length giving a greater expansion, and a thicker sidewall increasing the resistance of this whole surface, the breaking point is raised.

It might be stated that it has been determined that coating the tube adds from two to five pounds per square inch to the pressure resistance of the tube.

The hydrostatic pressure test was further supplemented by a very simple manipulative test designed to more closely approximate conditions experienced in using the tube. It has been found that a tube under an internal pressure of 10 to 15 pounds per square inch can be manipulated to an almost unbelievable degree by simple pressing, before rupture occurs. This simple pressing is done with the thumbs being careful to avoid digging in of the nails. With an internal pressure of 10 to 15 pounds per square inch, as many as 100 presses sufficient to raise the internal pressure to 40 or 50 pounds per square inch at each squeeze, have been made before failure came. Usually, however, after 50 presses of this nature the metal begins to give and usually fails with an additional 15 or 20 presses. Direct folding over of the tube bringing the cap and clip ends of the tube almost in contact, under an internal pressure of 10 to 15 pounds per square inch, brings failure after about five folds due to excessive creasing of the tin.

It might be stated that to raise the pressure of a tube 50 pounds per square inch requires a thumb pressure that only a very strong man could give. A tube under 10 to 15 pounds pressure per square inch is highly distended, that is, it has the feeling that it is completely and solidly packed with paste.

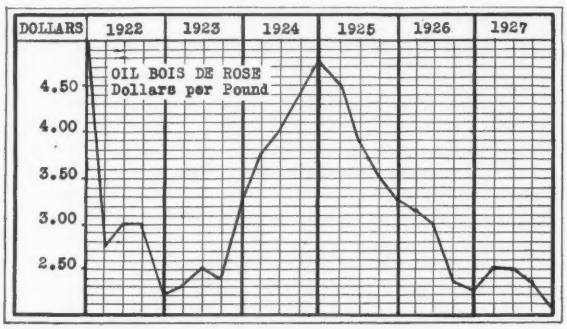
Failure of tubes in use, with concomitant splitting of the tin may be ascribed largely to manipulation of the tube, that is, the digging in of a finger nail or violent twisting, rather than to the fact that the wall thickness as a whole is too small to give sufficient resistance to pressure. In fact it is often possible to stand on a well clipped tube with breaking it. When failure does occur in this case it is generally by snapping off of the clip.

Further investigations are to be conducted to determine the pressure resistance of various styles of clips as well as the number of folds of the tube necessary to give the requisite strength. For this test the same hydrostatic testing apparatus will be used with a nipple equipped with a female thread of the same size and pitch as the cap end of the tube. The cap end of the tube can then be screwed into this nipple and the pressure applied from the cap end.

Low Prices For Bois De Rose

As is generally known, the present weakness of prices for oil bois de rose is the result of sharp competition between the material produced in French Guiana and shipped through the port of Cayanne and the material produced in Brazil. The Cayanne product has been produced for over fifty years, and supplies over 100,000 pounds per year, amounting to over seventy-five per cent. of the world consumption. The Brazilian industry dates only a few years back. Imports of Brazilian oil into this country during the past year totaled 28,000 pounds.

Production in French Guiana is carried on under concession from the French Government. Only convict labor is available, as France sends certain



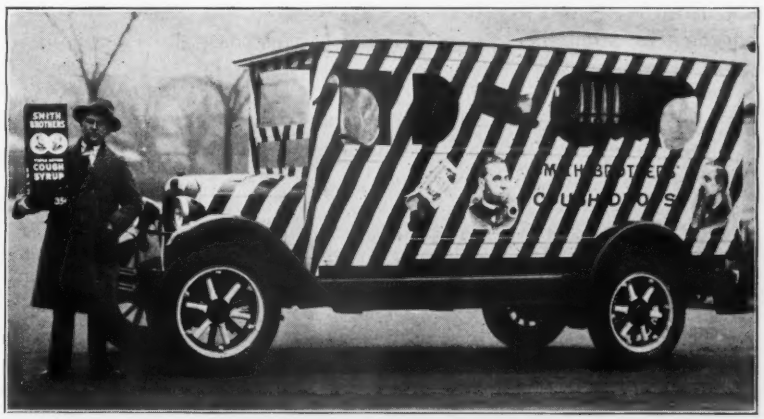
of her long term convicts to this possession. The convicts become experts at recognizing the proper species of rosewood tree from which the oil should be taken. The trunks are used for making furniture, and the smaller branches are distilled for oil. The country is very mild and prospectors are sent out into the jungles along the rivers to mark spot where there are sufficient trees of the proper species.

The company has thirteen plants located along the rivers of French Guiana and is constantly working farther into the interior of the country. Consequently production of bois de rose becomes more costly as the wood becomes more inaccessible.

The company operating in French Guiana also has a concession in Brazil from which they have obtained the same product as is distilled in French Guiana. The Oypoca river divides French Guiana from Brazil, and operations have been carried on both sides of this river by the French company. It is stated by the French factors that the proper species of trees is not so plentiful on the Brazil side of the river as on the French Guiana side.

After Eighty Years a Cough Syrup by Smith Brothers

FROM 1847 to 1922—a period of seventy-five years the famous Smith Brothers of Poughkeepsie, N. Y., made one product only—their cough drop that is sold in the black and white boxes. During that time they built up a reputation throughout the country so that to-day they are far and away the leaders in cough drop sales. Competition raised its head from time to time and is still doing so. Perhaps to meet some of this competition, Smith Brothers in 1922 added to their line another cough drop—namely the mentholated variety. This product appears in an orange colored box. But this step was not very radical since it sold to the same people through exactly the same channels.



The air calliope used with two salesmen's automobiles for parading through towns. The striping on the calliope and the automobiles are in green and white.

But last Fall a decidedly new step was taken by this firm. A cough syrup was announced. Interest was immediately aroused in the trade, although the thought was common that something other than the five cent packages should be added to their line.

The advertising appeal and the methods being pursued to place this product before the public are interesting. In the first place the product is labelled on the box and the bottle merely as Smith Brothers Cough Syrup. But the advertising and displays are built up on the appeal of "Triple Action" Cough Syrup. The phrase, "Triple Action" does not mean that the product is three times as effective in the same way as any other cough syrup, but it means that the product has three separate and distinct properties. In other words the "Triple Action" or three properties of the syrup are: 1. Soothing, 2. Mildly Laxative, 3. Clears Air Passages.

A typical window display being used to promote cough syrup sales in the present campaign. It will be noticed that the three points of "Triple Action" are stressed.

This appeal is being used in the present efforts to effect national distribution. For this purpose an air calliope mounted on an automobile is used in conjunction with two salesmen's automobiles. The

three cars are striped in green and white and parade through the town that is being covered. At the same time window displays as shown in the illustration are placed throughout the town, and fairly large space is used in the local newspapers.

Thus far this method has been used to cover practically all of New York State, part of Pennsylvania, Milwaukee and part of Chicago. The company estimates that complete national distribution will not be effected for at least three years.

While the manufacturing and mixing of the cough syrup is not of especial interest, installation of the packing machinery is rather unique. In the first place the space alloted for this operation was definitely fixed. Also production of vast proportions was not wanted until after effective national distribution was established. Because of these points a flexible arrangement of standard units was used. In this case it was necessary to lay the units out in a U shaped

Illustration No. 2, showing the end of the dryer at right, followed by the filling machine, bottle cap tightener, and two labellers the second of which is in the left foreground.

circuit with the start and finish at the same end of the building.

Illustration No. 1 shows the start of the operation with the bottle washer in the foreground, followed by the dryer, and then followed by the filling machine as the corner is turned. In front of the dryer is placed a table to feed the bottles to the dryer. The bottles are received in the same printed cartons in which they are shipped after filling. Thus when the bottles are placed in the dryer, it is only necessary to move the carton over to the finishing side to pack the finished bottles in it.

Illustration No. 2 shows the end of the dryer shown in illustration No. 1, as well as the filling machine. Following the filling, the metal caps are placed on by hand, and then tightened by the cap tightener adjacent to the filling machine. After leaving the cap tightener, the bottles proceed on a conveyer to the first labeller which places on the front label. This labeller is shown in illustration No. 2. The circular

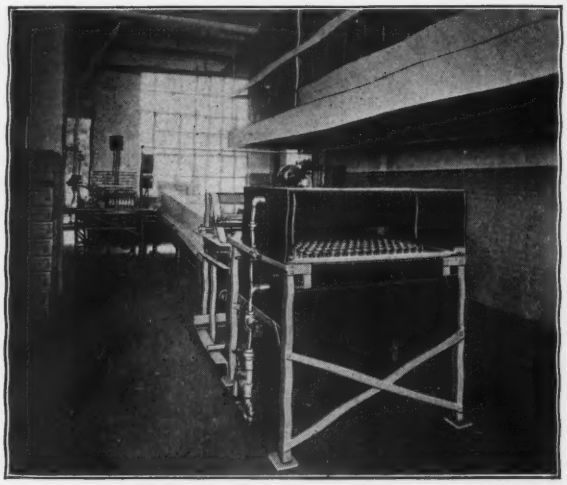


Illustration No. 1, showing the bottle washer in the foreground, followed by the dryer, and the filling machine in the back as the corner is turned.

table shown then receives the bottles, and this table is revolved so that the bottles are swung around to the second labeller, shown in the left foreground of illustration No. 2. This labeller puts on the back label. After labelling is completed the bottles proceed along the conveyor to be placed in the folding boxes and finally in the shipping cartons in which the original bottles were received.

Illustration No. 3 gives a view of the room from the end opposite to that from which the first two views were taken. This gives a close view of the open end of the dryer shown at the left, the filling machine in the center, and the cap tightening machine at the right. The conveyor is directly behind the filling machine and the cap tightener.

The manufacture and mixing of the syrup is accomplished on the floor directly above the packing room, and the syrup is fed to the filling machine through the pipe and hose connection shown on the right in illustration No. 3. *(Continued on page 185)*

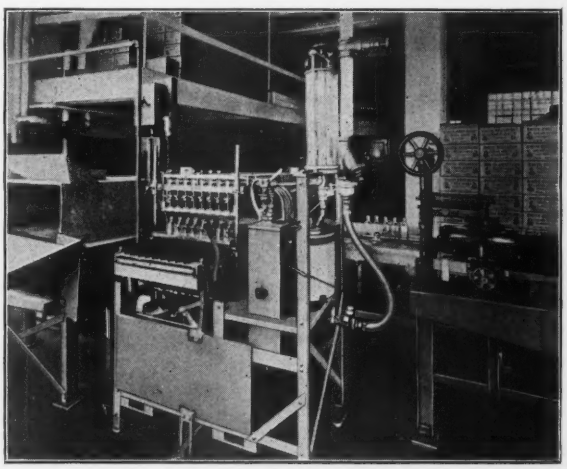


Illustration No. 3, showing a close-up of the open end of the dryer, the filling machine, and the cap tightener. This view is from the end of the plant opposite from where the other views were taken.

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WHAT part of your good will is invested in your container? Is it a convenient one, easily handled, lending itself to an attractive display? Does it create respect for your product at a time when the public has been educated to a discriminating taste in fine containers?

Those manufacturers who use the collapsible tube manufactured by A. H. Wirz, Inc., have a container which meets their exacting needs both in production and as a carrier for their product which must help build permanent good will.

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Railway Exchange Bldg. Chicago

What Rating—? Can You Give Your Closure

CHECK the closure you are using, on this table. Will it score one hundred, eighty or fifty per cent ? How many of these points are continually registering in favor of your product, or against it in the minds of dealers and of customers they must resell ?

The right closure is an integral part of a good product. If the closure permits leakage, evaporation, corrosion, rust etc. whether during the original closure in the dealers hands or during use and after reclosure in customers hands, the product is unconsciously judged accordingly. You cannot separate your product, your container and your closure, in peoples minds.

There is no need to guess at the way a closure will serve you and your business. Tests are so easy and practical to make. The satisfaction of knowing can be had for little or no trouble and at no cost.

Make this simple, practical test in your own laboratory or your own office.

Secure samples of various closures. Let us send you, as we will be glad to do, samples of containers with the inside screw thread together with plain and strikingly decorative threaded stoppers of glass, rubber, bakelite or porcelain and other compositions.

Fill your product into these containers and test for original seal by inverting the bottle or allowing it to lie on its side for some hours. Note for leakage.

Allow bottle to stand for some days and measure for evaporation, also note for rust, corrosion etc.

Test for reclosure by opening and reclosing a dozen or a hundred times—as your customers will do. Note particularly here, convenience and ease of opening—the test for leakage and evaporation.

Other tests will suggest themselves to you. They should be severe, because shipping clerks, temperature, moisture, time, hapenstance and no respectors of your product once it leaves your control.

Satisfy yourself that perfect protection—the kind that is obvious to dealer and customers is possible for your product.

Let us send you samples for a complete test.

The PERFECT CLOSURE SCORE CARD

CLOSURE	50%	
LEAKAGE } EVAPORATION }		30%
RUST		10%
CORROSION		10%
APPEARANCE	30%	30%
RECLOSURE	20%	
CONVENIENCE		10%
LEAKAGE } EVAPORATION }		10%

Spring Stopper Co.
165 Broadway, New York, N.Y.

Telephone Cortlandt 1495-1496-1497

Patentee of bottle finishing devices applied to the various types of automatic bottle making machines. Patents in United States, Canada and Foreign Countries.

Conti Soap Distributors, Inc.

E. R. Squibb & Sons

H. K. Mulford Co.

Inecto, Inc.

The only machine-made bottle with inside screw thread.

RE

30%

10%
10%
30%

10%

10%

ottle
ad.

TABLET TOLERANCES

The Combined Contact Committee of American Drug Manufacturers' Ass'n. and American Pharmaceutical Manufacturers' Ass'n. has submitted its third report to the Food, Drug & Insecticide Administration. The tolerances and essay methods for the compressed tablets included in the report are given here.

COMPRESSED tablets of Acetanilid shall show a variation not greater than 7.5% either way from labeled amount.

Weigh not less than 20 tablets and determine average weight. Powder in mortar and weigh out accurately a quantity approximately equivalent to five grains (0.324 gm.) acetanilid. Place in Erlenmeyer flask, add 20 cc chloroform and macerate with occasional agitation for one-half hour. Transfer solution and residue to small filter, collecting the filtrate in a 100 cc Erlenmeyer flask. Rinse the first flask with several portions of chloroform, pouring the washings through residue on filter and continue percolation of material on filter with chloroform until all chloroform soluble material is dissolved. Distill most of solvent. To the residue measuring about 5 cc add 10 cc of dilute sulfuric acid (1+9) and continue distillation to remove chloroform. Disconnect from condenser and continue digestion on steam bath with occasional rotating, especially at beginning of process, for three hours maintaining contents of flask at not less than 4 cc by addition of water if necessary. It is important that time of digestion not be reduced in order to insure complete hydrolysis of the acetanilid. Cool, dilute to 20 cc with water, add 10 cc concentrated hydrochloric acid and titrate with standardized potassium bromide-bromate solution.

Acetphenetidin and Salol Compressed Tablets shall show a variation not greater than 10% either way from labelled amount.

Weigh not less than 20 tablets and determine the average weight per tablet. Powder the tablets.

For acetphenetidin weigh a quantity of sample containing not more than 0.08 grams of salol, place in an Erlenmeyer flask, add 20 cc chloroform and macerate with occasional agitation for one-half hour. Transfer solution and residue to small filter, collecting the filtrate in a small lipped Erlenmeyer flask. Rinse the first flask with chloroform, pouring washings through the residue on the filter, and continue perculation of material on filter with chloroform until all chloroform soluble material is dissolved. Evaporate the chloroform by air blast without heat. Add 10 cc of a 2.5 per cent. sodium hydroxide solution and heat 15 minutes on a steam bath. Cool quickly to room temperature in running water to prevent partial hydrolysis of acetphenetidin. Transfer the liquid to a separatory funnel with a minimum quantity of water and rinse flask with the first 20 cc portion of chloroform to be used in the following extractions: Extract alkaline solution with three 20 cc portions of chloroform; wash each portion in a second separatory funnel with 5 cc of water; and pass chloroform solution through a small dry filter into a 200 cc Erlenmeyer flask. Reserve the combined alkaline solution and washings for determination of salol. Distill the combined chloroform extracts to about 5 cc. Transfer by means of a little chloroform to a small, weighed beaker or cyrstallizing dish; evaporate on a steam bath with the aid of an ari blast; cool, and weigh residual acetphenetidin at intervals until weight becomes constant.

For salol transfer combined alkaline solution and washings (reserved above) remaining after the extraction of acetphenetidin to a 125 cc separatory funnel. Acidify with 10% sulphuric acid. Extract with five portions of chloroform (25-20-10-10-10 cc). In a second separatory funnel wash chloroform solution with 10 cc of water. Evaporate chloroform solution at low temperature allowing last few cc to evaporate spontaneously. Dissolve extracted salicylic acid in a few cc of neutral alcohol; add 15 cc distilled water and two drops Phenolphthalein test solution. Titrate with N/10 Barium Hydroxide solution, shaking after each addition until a permanent pink color is produced.

Each cc of N/10 Barium Hydroxide solution used correspond to 0.02142 gm. of salol C_6H_4 (OH) $COOC_6H_5$.

Calomel Compressed Tablets shall show a variation not greater than 7½% either way from labelled amount.

Weigh out sufficient number of tablets to represent approximately five grains of calomel; and in any case not less than 20 tablets. Determine average weight, powder and weigh accurately a quantity sufficient to represent approximately five grains of calomel. Place mixture in about 50 cc of water and after solution of soluble fillers transfer to a small filter paper. Wash insoluble residue. Transfer filter paper containing calomel to a 200 cc glass stoppered Erlenmeyer flask and dissolve the calomel in solution of 2.5 grams of potassium iodide in 10 cc water and 35 cc N-10 iodine. Stopper immediately. Rotate flask gently at inter-

vals during one half hour or until complete solution of the calomel has taken place and then titrate the residual iodine with N/10 sodium thiosulphate, starch T. S. being used as an indicator. Each cc of N/10 Iiodine solution=0.02361 gm of HgCL. Calculate the amount of calomel contained in one average tablet.

Calomel and Soda Compressed Tablets shall show a variation from the labelled amount not greater than 10% either way for tablets of ¼ gr. or smaller; and not greater than 7½% either way for tablets larger than ¼ gr., when assayed by the method given.

Weigh out sufficient number of tablets to represent at least five grains of calomel and in any case not less than 20 tablets. Determine average weight, powder tablets and weigh accurately sufficient quantity to represent approximately five grains of calomel. Place mixture in about 50 cc water and neutralize with dilute acetic acid. After solution of soluble fillers, transfer to a small filter paper. Wash insoluble residue. Transfer filter paper containing calomel to 200 cc glass stoppered Erlenmeyer flask, and dissolve calomel in a solution of 2.5 grams of potassium iodide in 10 cc water and 35 cc N/10 iodine solution. Stopper flask immediately. Rotate the flask gently at intervals during one half hour, or until complete solution of calomel has taken place. Then titrate residual iodine with N/10 sodium thiosulphate solution, Starch T. S. used as indicator. Each cc N/10 iodine solution=0.02361 grams calomel (HgCl).

Cinchophen Compressed Tablets shall show a variation (including all tolerances) not greater than 7½% either way from the labelled amount when assayed by the method given below. Weigh twenty tablets, determine average weight. Powder these and weigh accurately a quantity sufficient to represent approximately 15 grains. Completely extract powdered sample of tablets with neutral alcohol (using three drops of Phenolphthalein T. S.) by warming gently with about 120 cc neutral alcohol, rotating flask occasionally. Cool and make up to 200 cc. Mix throughly and filter through paper covering funnel with a watch glass to avoid evaporation. Take 100 cc of filtrate equivalent to 7½ garins (0.486 gram) and titrate with N/10 sodium hydroxide until the distinct pink color is restored. Each cc of N/10 sodium hydroxide=0.02492 gm. cinchophen $C_6H_5C_9H_5$, NCOOH. (NOTE: If sodium bicarbonate has been used as a diluent in the manufacture of cinchophen tablets, a modification of the above method must be employed.)

Codeine Sulphate Compressed Tablets shall show a variation (including all tolerances) not greater than 9% either way from labelled amount.

Weigh not less than twenty tablets and determine average weight; powder, if desirable; transfer to volumetric flask; add sufficient water to make a thin suspension and add about 20 cc of 2% sulfuric acid. Allow the mixture to stand, shaking occasionally, for twelve hours or longer. Dilute to mark on flask, mix well and let stand till insoluble material has sedimented. Transfer to a separatory funnel an aliquot of the clear solution representing not less than one grain of codeine sulphate, make alkaline with ammonia and shake out with several portions of chloroform until aqueous solution is shown to be exhausted of alkaloid, using Mayer's Reagent for test. Evaporate combined chloroformic extracts to dryness on water bath and dissolve residue in few cc of neutral alcohol. Add 10 cc of N/20 sulphuric acid and titrate excess of acid with N/50 sodium hydroxide solution, using methyl red indicator. Each cc of N/20 sulfuric acid consumed corresponds to 0.019667 grams of codeine sulphate $(C18H_{21}O_3N)\ 2H_2SO_45H_2O$.

Phenolphthalein Compressed Tablets shall show a variation not greater than 7¾% either way from the labelled amount.

Weigh out sufficient number of tablets to represent 10 grains of phenolphthalein and in any case not less than 20 tablets, determine average weight, powder and weigh accurately a quantity sufficient to represent about ten grains of phenolphthalein. Add about 60 cc alcohol; boil gently for about 20 minutes, rotating flask occasionally. Cool, transfer to volumetric flask, make up to volume with alcohol; mix thoroughly; filter through paper, covering funnel to avoid evaporation. Pipette two aliquots each representing two grains (0.1296 gram) phenolphthalein, into beakers. Evaporate to dryness on a steam bath to remove alcohol completely. To dry residue add three or four drops or more if necessary of potassium hydroxide solution and dilute with five cc of water to dissolve the phenolphthalein completely. (As a film of phenolphthalein may be formed on the side of the beaker during the evaporation of the alcohol, great care is necessary to bring the phenolphthalein completely into solution). Add a piece of ice (about 40 grams) and four to 4.5 cc of iodine reagent. Success of this determination depends upon presence of reasonable excess of iodine (enough so that when this is acidified in next step a deep brown color showing an excess of iodine is observed in supernatent fluid. Is supernatent liquid is only pale yellow, insufficient iodine has been used. Then add strong hydrochloric acid from a burette, drop by drop, stirring solution with a glass rod, until precipitation is complete; and lastly add potassium hydroxide solution from a burette drop by drop to dissolve precipitate completely. (If fat is present, a little undissolved material may remain). Repeat process of precipitation with strong hydrochloric acid and resolution with potassium hydroxide solution three or four times, using small quantities of the reagents and adding small pieces of ice to keep solution cold. Add 1-2 cc of sodium sulphite solution and if necessary to remove fat, filter ice cold mixture through a Gooch crucible into a tall 250 cc beaker, washing several times with water. Acidify the solution with strong hydrochloric acid, add a few cc in excess and heat on a steam bath for 20-30 minutes. Filter the mixture through a weighed

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Group Advertising *and* Foreign Competition

By S. DeWitt Clough

Secretary, Abbott Laboratories

I HAVE spent many hours during the past five years in trying to evolve some practical plan for a co-operative publicity, or advertising program, for American Pharmaceutical Manufacturers' Association, American Drug Manufacturers' Association, and other allied groups in our industry. Many plans have been suggested and studied; most of them have had to do with the "See Your Doctor First" idea. My experience has been that there is not sufficient interest, at the present time, in our industry, in any such joint project, to properly finance and promote it successfully. This seemingly strange apathy on the part of most pharmaceutical manufacturers may possibly be explained by our growing interest in drug store sales—and these of course mean, directly or indirectly, more laity business.

We are all looking for, and working toward, greater volume to reduce our costs and to increase our profits. We must maintain and increase our sales in order to meet keener competition, more price cutting, possible mergers, chain store combinations, and impending foreign developments; all of these things make it necessary that we watch our step and keep up with the procession. Our interest, primarily, is in the medical profession—the doctor must prosper in order that we can continue to call him our customer, but, and I have underscored this word, we would all like to have the public walk into the drug store and ask for our goods. How we can secure lay sales, and still remain in the so-called ethical class, is a problem which is coming to the foreground in our industry with startling prominence.

The rift in the clouds of group publicity to the medical profession is the intense interest of manufacturers in directly reaching the laity after the fashion of Squibb, Norwich and Stearns.

The threat of competition from foreign cartels, not only in the export markets but also in this country is gravely brought to the attention of American medicinal manufacturers in this report.

Lambert as an Example

In 1921 the Lambert Pharmacal Company spent $11,000 a month for advertising to the medical profession, and their annual net profit was $115,000. To-day it is spending over $400,000 a month in advertising—almost $5,000,000 a year in advertising, to the public and their profits will be over $4,000,000 for 1927. The experiences of Squibb, Norwich, Frederick Stearns and others in the lay field are most interesting. In this connection I am reminded of the lines from Pope, in his "Essay on Man."

"Vice is a monster of so frightful mion,
As to be hated needs but to be seen;
Yet seen too oft, familiar with her face,
We first endure, then pity, then embrace."

Every manufacturer must solve this problem for himself. This is one rift in the clouds which is dividing our thought on co-operative publicity measures for the medical profession. In my opinion

*Semi-annual report of Publicity Committee of A. Ph. M. A. of which Mr. Clough is chairman.

we are drifting away, rather than coming closer to such a program.

However, there are still some publicity measures which we might adopt for the protection of our industry and for the promotion of our mutual interests.

The Cartel Menace

One of the important developments of the past year, which may affect the ultimate prosperity of the pharmaceutical manufacturing industry, in this country, is the combination of cartels in Europe organized with the dominant purpose of controlling world markets. Among these groups is the chemical cartel, organized for offensive and defensive measures against our growing chemical and pharmaceutical industry in the United States. From our present perspective of prosperity in the country, such a menace may seem a long way off and not worth worrying about. It does not seem, that at present, our pharmaceutical firms in the United States are alive to the situation.

Immense sums of money have gone abroad from this country to finance the interests which are now seeking to seriously impair our industries. Facts and figures are available to prove this statement.

It will be difficult to meet this competition, once it becomes effective, particularly in export fields. It may be interesting to note some of the methods of these cartels in stifling export competition. When a dozen or more of Europe's largest chemical associations combine to get business, the profits of the entire group are prorated and the losses suffered by one firm, selected to sell competitive items at, or below cost, to put competitors out of export markets, are also distributed among the group. Americans export business is imperiled by such tactics.

A Threat to Domestic Markets

But an even more serious phase of the situation, and one which may come close home to our own business, is the plan of European combinations to dominate our own domestic markets. You ask how is this possible ? We have only to review past history to recall that prior to 1914 our chemical industry in this country was practically nothing and the importation of European dyes, chemicals and pharmaceuticals was growing larger each year. Briefly, our industries were dependent on Europe for chemical supplies and the medical profession was dependent on Germany for many synthetics now made in this country. Whether or not we now realize it, serious inroads into the American manufacture of pharmaceutical products were being made prior to 1914. The war was a blessing in disguise, as far as our industries were concerned.

In the "Census of Dyes and Coal-Tar Chemicals," published by the United States Tariff Commission in 1918, the following statement appears:

"Notable advances have also been made in the manufacture of synthetic medicinals in the United States. Several of them, including acetanilid, acetphenetidin, benzoic acid, phenolphthalein resorcin, salicylic acid and its drivatives, salol and acetylsalicylic acid were made in the United States in 1914. However, the German dye factories, especially the house of Bayer, dominated the world's markets in these drugs. In fact a large portion of the American prewar production was carried on in factories owned and controlled by the German manufacturers.

"Two drugs most widely used in the treatment of influenza were acetylsalicylic acid and salol. The output of both of these drugs during 1918 showed a large increase over 1917. There can be little question that if the manufacture of these drugs in the United States had not been well established, the mortality from influenza during the recent epidemic would have been much larger than it was."

New Products Made Here

Again, in 1921, the United States Tariff Commission made the following statement under the heading, "Developments in the Industry":

"Prior to the war there was practically no manufacture in the United States of synthetic organic chemicals other than those of coal-tar origin, with the exception of a few products produced in considerable amounts by relatively simple and inexpensive processes. These include acetone, chloroform, ether, acetic acid, formaldehyde, acetaldehyde, amyl acetate, vanillin, and a few others.

"As with coal-tar products, the supremacy of Germany in nearly all other organic compounds was virtually unchallenged prior to the war. With the cessation of our imports from this source, production of these commodities was undertaken in this country, until to-day the United States is able to manufacture nearly all of its requirements of compounds of this nature."

Increased Production

And in 1925 the Tariff Commission reported increasing production of chemicals in this country, as follows:

"The production in 1925 of synthetic organic chemicals other than those derived from coal-tar was 156,878,013 pounds, an increase of 35 per cent. over the output of 115,817,865 pounds in 1924. Sales in 1925 amounted to 114,626,209 pounds, valued at $23,632,779.

"Expansion in the manufacture of this group is the outstanding feature of the progress made by the American chemical industry in 1925. In addition to the increased output of a number of the more important products, a large variety of chemicals made only on a relatively small scale prior to 1925 were produced in substantial commercial quantities."

And now we are again faced with a situation which may become even more serious. Let us cite some of the things which are already happening.

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Increased Cost of Doing Business

Traveling
Free Deals
Commissions
Advertising
Big Volume

By Leroy Fairman*

Everyone talks of the steadily increasing cost of getting goods to the ultimate consumer. What are the things responsible for this rapidly mounting cost that is narrowing the margin of profit to manufacturers?

IT seems extremely difficult for the human mind to grasp the fact that the dollar has no static or stable value. We know well enough that the dollar of to-day will not buy as much as did the dollar of 1914; but we dismiss this important fact with the sweeping generality that "everything has gone up," and let it go at that.

We still talk about the dollar as having an exact value, and speak of "a dollar's worth" as if there were actually any such measure of quantity or value as a "dollar's worth." The business man tells us with considerable pride in his voice that he pays his stenographer thirty-five dollars a week. He would not have dreamed of boasting in 1914 of the fact that he paid his stenographer twenty-three dollars a week; but the girl knows full well that her thirty-five dollars of to-day will buy no more necessities of life than would twenty-three dollars fourteen years ago.

The manufacturer; in many cases, still labors under a confusion of mind as to what, if anything, a dollar means. He finds that the cost of everything he uses in his business is not at all what it used to be. His rent, his machinery, his labor and all the materials he uses in his business have gone up and up.

More than anything else, it appears, the cost of selling and distribution of his goods has increased. This latter topic is one with which the best economic minds of our country are struggling; and it is so difficult and so involved in its nature and ramifications that no attempt can be made even to discuss it in the limited space of such an article as this.

Traveling Salesmen

There is one phase of the cost of distribution, however, which should be mentioned; and that is the present high expense of selling through the traveling salesman. Not only does the salesman necessarily get more money than he used to get, but all his expenses have gone up. Railroad fares are much higher, and no longer does the old Commercial House welcome the "drummer" at $2.50 per day, American plan. Expense accounts in these days are truly something to groan about!

The jobber, too, is complaining about his high cost of selling. Although the old discount of "15 and 2" still largely prevails, the jobber is constantly asking for more and in some cases is getting it. And where he fails to get a higher discount, efforts are made to placate him with free goods—which amounts to the same thing.

Volume and Profits

The fact that many manufacturers are doing a larger volume of business than ever at a smaller profit than ever shows that they have failed to adjust their selling prices to the present cost of doing business. They are not charging enough for their goods. Their failure to get enough money to enable them to show the proper margin of profit is due to many causes. The principal one is perhaps their fear that the consumer won't pay a higher price. The consumer, they say, "has always paid fifty cents" for such a product as theirs and won't pay more.

In some cases an attempt is made to dodge this supposed condition by a decrease in the quality of the goods; but this expedient eventually comes back to the manufacturer with all the force of a well-aimed brick. As a matter of fact the feeling that people won't pay more than they used to for a product is, in most cases, a fallacy—as people are paying more, freely and willingly, for practically everything they buy.

Competition Increases Cost

In many lines of business, and particularly in those lines which are marketed through drug stores, the state of competition encourages the feeling that people won't pay more. All competition increases the cost of doing business; and during the past few

*Copy Chief, Charles C. Green Advertising Agency.

years competition of every type has increased and become more strenuous.

Among the large number of new manufacturers coming into the field, there are, of course, many who expect to do business at a loss until they become established; and, sad to state, there are many manufacturers who are thoroughly established but are actually doing business at a loss to-day, although they do not fully realize it, or refuse to acknowledge the significance of the cold figures which show them that they are failing to make an actual profit.

These types of competition make it extremely difficult for the manufacturer who really knows where he is going, to establish a selling price on his goods which will offset the greatly increased cost of doing business.

In order to get the best of competition and force goods out on the market in a larger volume, strenuous selling methods are often employed which, in the end, *increase* the cost of doing business instead of decreasing it.

Cost of Free Deals

Many manufacturers resort annually or more frequently to free deals; and others make a practice of giving thirteen, fourteen or fifteen items to the dozen. These expedients increase the cost of doing business instead of decreasing it. The goods given away cost money; they are a gift to the dealer and are, therefore, to be reckoned as a means of selling the dealer. They do have the effect of getting an increased volume of goods out on the market and stocking up the dealer with merchandise which he would not otherwise have bought. But it has cost money to do this; and the goods, instead of being sold, as so many manufacturers imagine, have not been sold at all—no merchandise is actually sold until it is in the hands of the consumer.

Here arises another job—selling the consumer. This must be done, as a rule, through advertising. The dealer has been sold, which is one item of expense; and now the consumer must be sold, which is another item of expense. Few products will stand this double selling expense and still show a satisfactory profit.

If the individual manufacturer could really increase his annual volume by free deals or giving two or three free packages with every dozen, and if nobody else were using the same method of forcing sales, he would stand a better chance of really accomplishing something. But as a matter of fact, scores of other manufacturers of similar goods are following the same course, with the result that nobody makes any progress except adding still more to the cost of doing business, decreasing profits and throwing the whole business machinery, including production, out of gear.

Competition inside the drug store still further adds to the cost of doing business. Not only has the manufacturer to compete, inside the store, with other manufacturers in the same line of business, but with a vast quantity of merchandise of nearly every conceivable type. The modern drug store does not carry baby carriages or coffins—probably because they take up too much room; but pretty nearly everything else the human animal needs in his journey from the cradle to the grave can now be bought in the drug store. Consequently the consumer who may go to the drug store with the firm purpose of buying *your* product, is confronted inside the store by all sorts of merchandise, temptingly displayed, and is instantly reminded of a dozen other things that he or she really needs.

Perhaps, too, the intending purchaser is waited upon by a clerk intent upon earning a P. M. offered by one of your competitors or by a manufacturer of some other line of merchandise; and in many cases the sale which should have been yours is deflected into other channels by this vast and alluring volume of inside-the-store competition. This situation obviously increases your cost of doing business because it gives you a smaller and smaller volume of sales for the money which you have expended in selling effort and advertising.

Advertising Competition

Advertising competition is another factor of great importance. One of the few things which has not gone up in price is the subscription or sales price of magazines and other periodicals.

Not so many years ago the average woman would hesitate a long time before she paid from $1.50 to $3.00 a year as a subscription for a magazine. Nowadays these sums mean little, if anything. As a consequence, the many excellent magazines in the field have found it comparatively easy to secure and maintain a tremendous volume of circulation. Attracted by the apparently easy money in publishing, a whole horde of new magazines have come into existence. These, too, by astute editorial management and a highly intelligent analysis of the sort of publication which will sell readily, have achieved enormous circulations. As a result, the tables of even small-town and rural homes are covered with periodicals every month in the year.

Now the costs of publishing have gone up, just as has everything else; and the burden of maintaining this great number of newspapers and magazines falls upon the advertiser. He has to use more publications than he did in times gone by; and he has to pay a far higher rate per line for his space, for the reason that advertising rates are governed by the character and volume of circulation.

Not only has the cost of advertising in dollars and cents greatly increased, but the volume of advertising has risen to such an extent that in most publications large space is necessary in order to attract attention. When a newspaper has from thirty-six to forty-eight pages on the two or three best days in the week, the small advertisement has little chance of being seen; and when the magazines carry fifty pages or more of

(*Continued on page 182*)

News of the Drug Industries

United Drug-Sterling Products Merger Will Be Designated as Drug, Inc.

Methods of Carrying Out Proposed Combination Given in Letter from L. K. Liggett to Stockholders of United Drug Co.—Special Meeting Feb. 14 for Vote of Stockholders—Complete Recapitalization of United Drug Co. to be Accomplished First.

The first official confirmation of the long rumored merger of United Drug Co. and Sterling Products, Inc., came to light during January in the form of a letter from Louis K. Liggett to the stockholders of United Drug. A special meeting of the stockholders of United Drug has been called for Feb. 14 so it seems that the merger will be completed during February as predicted (DRUG MARKETS, Dec. 13, 1927.)

A new United Drug Co. is to be incorporated, with such readjustment of financial structure as may be necessary. Directors of the company have recommended that the reconstruction be authorized, irrespective of any action respecting the merger with Sterling Products. Substantial savings in charges and taxes would be effected, it is pointed out.

The plan of reorganization and for the acquisition of Sterling Products is outlined as follows:

"First, it is proposed to organize a new United Drug Co. and to sell to it all the assests and business of the present United Drug Co. of Massachusetts and to liquidate that company. In that event, the new United Drug Co. will assume all the liabilities of the Massachusetts company and will pay an amount of cash sufficient to pay off its first preferred stock at par and accrued dividends and will issue to the Massachusetts company an amount of common stock equal to the present stock of the latter company.

"While the first preferred stock of the Massachusetts company is payable at par in liquidation, its call price is $60 a share, and your directors are of opinion that as part of the arrangement with the new United Drug Co. it should be required to offer to the present preferred stockholders in the Massachusetts corporation an opportunity to exchange their stock for five per cent. debentures of the new United Drug Co. on the basis of $60 of face value of debentures for each share of first preferred stock of $50 par value. For this purpose there will be created an issue of $40,000,000 face value of five per cent. twenty-five-year debenture bonds with substantial sinking fund requirements. Provision will also be made to retire the present issue of $12,500,000 of six per cent. bonds out of funds which will be obtained in part from a proposed issue of $5,000,000 five-year five per cent. serial notes, payable $1,000,000 yearly, and in part from cash and marketable securities of the company.

"The common stock to be issued to the Massachusetts company will be 415,000 shares of the par value of $100 each, being the amount of the persent issued capital stock of the United Drug Co. of Massachusetts. This amount includes the stock which the United Drug Co. holds in its treasury, which stock, in accordance with the authority given by the stockholders in 1925, is held subject to options to officers and employes of the company for the next two years. It is proposed that that portion of the stock issued in respect of this treasury stock shall be returned to the new company and held by it to carry out the above options.

"If the foregoing transaction is carried out, it will mean that the present preferred stock of the United Drug Co. will be paid off, either in cash at par, or in new five per cent. bonds at $60, and that the common stockholders will receive one share of $100 par value stock in place of each share of common stock now owned by them, and when the merger later referred to is carried out they will receive stock in the new holding company to the amount stated below.

"Second, your directors further unanimously recommend that the new United Drug Co. when organized, be merged with Sterling Products, Inc., into a new holding company to be organized under the laws of Delaware, to be known as Drug, Inc., with an original authorized capital of 3,000,000 shares of no-par value common stock.

"When this plan is consummated, Drug, Inc., will own the entire capital stock of the new United Drug Co. and of a new Sterling Products to be incorporated. It will issue on the basis of two and one-half shares of no-par value common stock for each share of stock of the new United Drug Co. and one and three-quarters shares of its no par value stock for each share of stock of Sterling Products, Inc., so that each common stockholder of the present United Drug Co. of Massachusetts will receive two and one-half shares of the new no-par value stock for each share of the stock of the Massachusetts company now owned by him, and each stockholder in Sterling Products will receive one and three-quarters shares of the new no-par value stock for each share of Sterling Products now owned by him. The balance of the authorized capital stock will be reserved to be issued for corporate purposes.

"The combined earnings of the two companies for 1926, applicable to their common stocks, were $10,370,817.68. It is estimated that the combined earnings for the year 1927, applicable to their common stocks, were in excess of 1926."

Combined balance sheet of United Drug Co. and subsidiaries as of Dec. 31, 1927, showed current assets of $48,106,363, and current liabilities of $12,966,424, leaving net working capital of $35,139,939. Balance sheet of Sterling Products, Inc., as of Dec. 31, 1927, showed current assets of $10,704,726, and current liabilities of $3,015,301, leaving net working capital of $7,583,062. A consolidated balance sheet of the two companies and subsidiaries shows therefore, current assets of $58,704,726, and current liabilities of $15,981,725, leaving net working capital of $42,723,001.

United Drug Co. owns Louis K. Liggett Co., Seamless Rubber Co., National Cigar Stands Co., Hudson Valley Pure Food Co., United Writing Paper Co., Marcus and Stationery Co., Sherman Envelope Co., Absorbent Cotton Co. of America, and Liggetts International Ltd., which latter owns Boots Pure Drug Co. of England.

Sterling Products, Inc., controls Proprietary Agencies, Ltd. Sterling Products Ltd., California Fig Syrup Co., (California Syrup of Figs) The Bayer Co., (Aspirin and Pepsolin) The Bayer Co. Ltd., Wells & Richardson Co., (Diamond Dyes) Wells & Richardson Co. Ltd., The Charles H. Phillipps Chemical Co., (Milk of Magnesia, Cocoa and Emulsion of Cod Liver Oil) Sterling Remedy Co., (Cascarets) Knowleton Danderine Co., (Danderine) Household Products Inc., Centaur Co. (Castoria) Syrup Pepsin Co., (Dr. Caldwell's Syrup Pepsin and Pape's Diapepsin) H. A. Metz Laboratories, (Oscodol and medicinals) and Cook Laboratories.

N. Y. Pharmaceutical Conference Gets "Cease and Desist" Order

New York Pharmaceutical Conference, Inc., is charged with maintaining retail resale prices through "coercion, intimidation, boycott and threats of boycott" receives "cease and desist" order from Federal Trade Commission.

In prohibiting the conference from such practices, the commission also charged that the organization, through its affiliated associations, favored maintenance of a system of minimum retail prices and strongly opposed the practice of manufacturers granting special terms and discounts to chain drug and department stores. Affiliated associations of the conference, the commission declares, have an aggregate membership at various times of from 2,382 to 3,200 retail druggists and pharmacists of New York city and Westchester County out of an average total of approximately 3,850.

The commission's order prohibits the respondent association or its officers and individual members from "lessening competition in the course of trade in drugs, proprietaries, drug sundries and other articles usually sold in retail drug stores or pharmacies, or any of them, entering the State of New York from other States."

Three chief methods were employed by the New York Pharmaceutical Conference, Inc., according to the Federal Trade Commission's public announcement, by which it sought to induce manufacturers and other vendors of pharmaceutical goods to adopt and enforce the price plan of the conference known as the "distributor plant." The commission declared these methods were: (1) use of a so-called "courtesy card," (2) publication in the official organ of the conference, the New York Pharmacist, of a list of those manufacturers, wholesalers and jobbers to whom such courtesy cards had been issued and (3) propaganda and publicity, of which the "distributer plan" was one form.

Somers Trade Board Toastmaster

Drug and Chemical Section, New York Board of Trade and Transportation, announces plans for the third drug, chemical and allied trades dinner to be held March 15, at Hotel Waldorf-Astoria. Hon. Arthur S. Somers will officiate as toastmaster. Tables of ten may be secured in advance and reservations at six dollars per cover made by communicating with S. B. Penick, chairman, at the offices of the section, 41 Park Row, New York.

Dodge & Olcott Co. elects following officers at annual meeting: Francis T. Dodge, president; Herman G. Weicker, first vice-president; William G. Moore, second vice-president; J. H. Howe, secretary; and F. C. Allen, treasurer. Dr. Frank D. Dodge remains chief chemist and C. A. Myers, manager of the plant at Bayonne, N. J.

Repeal of Combines Investigation Act, under which Proprietary Articles Trade Association was recently declared illegal, is advocated by O. Connor, K. C., former Canadian commissioner of living costs, in an address before Canadian Plumbing and Heating Guild, Jan. 25.

World Conference on Narcotic Education organizes second annual observance of Narcotic Education Week, Feb. 22-29.

Franks Chemical Products Co., Brooklyn, completes installation of new equipment in its Bush Terminal plant.

{ *Drug Industries Personalities* }

American Pharmaceutical Association elects David F. Jones, of Watertown, S. D., President for 1928. Other officers elected are: A. W. Pauley, St. Louis, First Vice-President; W. H. Zeigler, Charleston, S. C., Second Vice-President; H. C. Christensen, Chicago, H. A. B. Dunning, Baltimore, and S. L. Hilton, Washington, D. C., Members of the Council for three years. The balloting was conducted by mail.

George R. Flint, vice-president, Flint, Eaton & Co., Decatur, Ill., drug manufacturers, is elected president, succeeding the late J. G. Flint, his father. Guy C. Taylor, chief chemist, is elected vice-president and Edna M. Peck, secretary-treasurer. Sam Morthland is the only new member of board of directors whose membership has been reduced to seven.

Dr. William J. Schieffelin agrees to discontinue libel suit against former Mayor John F. Hylan upon retraction of statements made by latter April 16, 1919, against Schieffelin & Co. and Dr. Schieffelin personally in regard to his connections with Citizens Union of which Dr. Schieffelin is chairman.

William Cordes, president, Prophylactic Brush Co., Inc., dies Feb. 1, at Northampton, Mass., aged 55. Mr. Cordes was successively salesman, sales manager, manager and treasurer, Florence Manufacturing Co. which in 1924 became Prophylactic Brush Co.

Carl Weeks, Armand Co., addresses the recently formed Eastern Iowa Druggists' Association Jan. 31. The association was informally launched last November, and preliminaries were completed at the January meeting.

Ralph Aronson is elected president of Woodworth, Inc., New York, (Veigay, Karess, and Fiancee perfumes). Vice-presidents are Theodore Kirby, Joseph Keho, and John Bartholomew. Walter G. Button is treasurer.

Frank T. Robinson, son of John C. Robinson, is now with Monsanto Chemical Works covering the Chicago territory with Walter L. Filmer. Mr. Robinson formerly covered this territory for Powers-Weightman-Rosengarten.

Russell B. Stoddard returns to Ungerer & Co., New York, in capacity of sales manager in full charge of sales and advertising. Mr. Stoddard severed his connection with Ungerer & Co. a year ago.

B. J. Gogarty is now with the Metropolitan sales force of The Rossville Co., Lawrenceburg, Ind. Mr. Gogarty was for many years associated with crude drug merchants.

W. Schocher, essential oil producer, returns to his home office, W. Schocher & Co., Jaffa, Palestine, after a four month visit to this country.

S. Foster Roberts, formerly with E. Fougera & Co., is appointed sales manager, J. L. Hopkins & Co., New York.

Richard Gwathney, president of the Richmond, Va., whosesale drug company bearing his name, dies Feb. 1, aged 58.

Donald S. Dowling, associated with perfume importers for past eight years, becomes editor of "Toilet Requisites."

$195,000 For Common Cold Research

The common cold, which causes the purchasing of probably the largest quantity of drug products, is to be studied at Johns Hopkins University by The John J. Abel Fund, for the establishment of which the Chemical Foundation has donated $195,000. An exhaustive study of the origin, nature, and possible cure of the cold will be made. The fund will provide $25,000 in the first year, $35,000 in the second year, and $45,000 in the third and fourth years.

The following faculty committee will administer the research work: Dr. Lewis H. Weed, dean of School of Medicine, Chairman; Dr. William H. Howell, director of School of Hygeine and Public Health; Dr. Warfield T. Longeope, Professor Medicine; Dr. Carroll H. Bull, Professor Immunology; Dr. W. H. Frost, Professor Epidemiology; Dr. Samuel J. Crowe, Professor Laryngology and Otology; Dr. Lawrence H. Baker, Executive Secretary of Medical Faculty.

Mexican Rulings On Medicines

Medicines and toilet articles can be sold in any store in Mexico provided there is no State law that prohibits such sale, according to a recent ruling of the Department of Health at Mexico City. Products of this nature offered for sale in stores other than drug stores must be kept separate from other merchandise. All products sold must be registered according to the Mexican law and have the stamps of the Health Department affixed.

The registration regulation was issued June 1926, but only recently made effective. This decree requires that all proprietary medicines have the formula in Spanish on the package, and the preparation must be registered at the Department of Public Health, Mexico City.

Eight members of "Headache Gang," sometimes referred to as the "Aspirin Ring," involved in theft of $92,000 worth of the drug from Bayer Co. a year ago, receive heavy sentences, on conviction as receivers of stolen goods. This apparently ends the case as no traces of the actual thieves have ever been discovered. In commenting upon the theft, H. I. Phillips, in the N. Y. Sun, states that $92,000 worth of Aspirin would cure a headache reaching from Chillicothe, Ohio, to Cairo, Egypt, and that it would take three and a third times the water of Lake Erie to wash down the dose.

United States imports during November, 1927, perfumery and toilet waters, valued at $287,158; perfume material, valued at $177,149; and cosmetics, powders, creams, etc., valued at $54,594. Of these amounts, $269,623 worth of perfumery and toilet waters; $119,696 worth of perfume materials; and $42,-151 worth of cosmetics, etc. came from France.

Magnus Mabee & Reynard, Inc., published new January-February 1928 price list and catalogue for manufacturers and wholesalers. With this issue the usual condensed pamphlet sent out since May, 1924 is replaced by a complete catalogue better adapted to acquainting buyers with products, classifications and prices.

American Metal Caps are now under the sales guidance of Walter H. Wiseman, formerly sales manager of the opal department of The Monogah Glass Co., Fairmont, W. Va. Mr. Wiseman has moved to New York close to the plant of American Metal Cap Co. in Brooklyn, N. Y.

American Pharmaceutical Manufacturers' Association is making plans for summer meeting at Lake Wawasee, Kosciusko County, Northern Indiana, week of June 4th.

Chicago Drug & Chemical Association was addressed by Dr. Gilbert Fitzpatrick on "Why not live a hundred years ?" at the January meeting of the Association held Jan. 26.

Ungerer Is Denied Rehearing In Resinaromes Duty Appeal

Ungerer & Co., Inc., New York, is denied rehearing in its appeal on the duty of resinaromes, by U. S. Court of Customs Appeals. November 14, the court ruled that resinaromes were dutiable at 40 per cent. ad valorem by their similtude to mixtures or combinations used in the manufacture of perfumery. The petition for a rehearing was based on the court's application of the similitude clause of the tariff act. The act provides for three different classes of perfumery materials—fixatives of animal origin, natural and synthetic aromatic chemicals, and mixtures and combinations. Resinaromes being natural vegetable products, the court excluded them from the first two classes and likened them to the third. The importer declared that similitude should refer to use, and that resinaromes are used as fixatives and also to add odor, and that they are most similar to fixatives of animal origin, dutiable at 20 per cent. The government filed a brief opposing a rehearing and upholding the court's interpretation of the similitude clause and its likening the resinaromes to mixtures.

Wholesale druggists probably think that all the possible bad breaks come their way, but it has been shown that they have next to the least number of poor accounts, being bettered only by department stores. Of the seven lines studied by National Associations of Credit Men, the wholesale druggists sustained a loss of .00350 or three and one-half mills per dollar, while department stores lost only .00255. Dry goods wholesalers and manufacturers sustained the highest loss of .01152 . Other lines included were: Shoe manufacturers and wholesalers, retail clothing, wholesale hardware, and wholesale jewelry.

Bureau of Prohibition announces that constant progress is being made in attempts to secure denaturing formulas for industrial alcohols that will meet the needs of industry and yet not be destructive of human life if the alcohol is diverted to beverage uses, but will be obnoxious in taste and odor and difficult for bootleggers to break down. Although no immediate changes are contemplated in existing formulas the Bureau will continue experiments to secure a mixture so difficult and so expensiv eto separate that practically no denatured alcohol will be diverted for beverage purposes.

The Lasker Foundation for Medical Research is established at University of Chicago by Mr. and Mrs. Albert D. Lasker who have donated $1,000,000 for the purpose. The fund for the present will be devoted to discovery of the causes of death from heart disease, cancer, and Bright's disease, the object being to overcome those diseases which attack men and women of middle and old age. Mr. Lasker is chairman of the board of Lord & Thomas and Logan.

Oakland Chemical Co.'s patent suit against Rose N. Bookman alleging infringement by defendant's mark "Peroxogen" against "Dioxogen," dismissed by New York Court of Appeals, which held that the mark "Dioxogen" is descriptive and therefore not proper ground for a trade mark. The court, in arriving at its decision, held that mere misspelling is not enough to avoid descriptiveness.

Ambergris again rewarded unsuspecting fisherman, when on Jan. 25 two clam diggers on the Pacific Coast near Astoria, Ore., uncovered a "ball of tar-like substance" weighing between four and five pounds. Upon examination at Astoria the material was found to be ambergris.

Wenatchee Rex Spray Co., Seattle and Wenatchee, Wash., Appoints the western office of the Western Advertising Agency, to direct a campaign on "Fly-Tox." Pacific Coast newspapers and farm journals will be used.

Edward Mallinckrodt

Edward Mallinckrodt, chairman of the board, Mallinckrodt Chemical Works, St. Louis, dies February 1, aged 83. Beginning life January 21, 1845, the son of Emil Mallinckrodt, a German immigrant, his early training was along agricultural lines on his father's farm bordering on the river in what is now North St. Louis.

Edward and his brother, Otto studied chemistry in Germany for three years, first in a laboratory in Wiesbaden and later at De Haen Chemical Works, near Hanover. They returned in 1867 and with a third brother, Gustavus, organized G. Mallinckrodt & Co., manufacturing chemicals in a small building on their father's farm. In 1882 Mallinckrodt Chemical Works was incorporated with Edward Mallinckrodt president and general manager. In 1889, he organized and became president of National

Ammonia Co., which associated with other companies engaged in ammonia manufacturing until their absorption by the Du Pont interests two years ago.

The present site of Mallinckrodt Chemical Works is on part of the farm where Edward was born. Although chairman of the board at the time of his death, Mr. Mallinckrodt was succeeded by O. L. Biebinger as president several years ago. His son, Edward, Jr., is vice-president.

Mr. Mallinckrodt, one of the wealthiest St. Louisans, had given more than $1,000,000 to scientific education and hospitals. The largest single item was $500,000 to Harvard University for a building to house the Department of Chemistry.

A gift of $166,000 toward a fund of $500,000, which was matched by the Rockefeller Foundation, for an endowment for research work at the Washington University Medical School came in 1916. This special endowment was for research in pediatrics.

Mr. Mallinckrodt and his son made a large contribution toward a completed fund of $1,000,000 for a radiological institute for Washington University Medical School. The gift was about $250,000, and the new division was to bear the name of the Mallinckrodt Radiological Institute. The larger portion of the $1,000,000 was given by the Rockfeller interests.

Mr. Mallinckrodt was a member of the corporation of Washington University and the board of trustees of St. Louis College of Pharmacy and took an active interest in the work of these two institutions, seldom missing a board meeting. He was a director of Shaw's Garden and a member of the American and Missouri State Pharmaceutical associations, Association for the Advancement of Science, American Chemical Society, American Institute of Chemical Engineers and Society of Chemical Industry, Deutscher Chemiker Verein of Berlin, and the St. Louis Academy of Science.

In addition to his philanthropy, Mr. Mallinckrodt was greatly interested in horticulture and works of art, included in his art collection were works of Ruysdael, Corot, Daubigny, Natier, Raeburn and Romney. He also had a portrait of himself done by Orpen. Among his gifts were several paintings and a collection of Japanese lacquers to the St. Louis museum.

Francis Henry Sloan

Francis Henry Sloan, president of Dodge & Olcott Co., New York, dies Jan. 13 at his home, 267 Hancock st., Brooklyn, N. Y., in his seventy-seventh year following a short illness. Funeral services held Jan. 14.

Mr. Sloan was born in Louisville, Ky., and lived in Brooklyn for nearly forty years. Entered the employ of Dodge & Olcott as a boy and rose gradually until he became its head. He was chairman of the board of directors, from which position he recently retired.

Mr. Sloan was also president of Sloan, Graves & Smeltzer, a director of Federal Insurance Co. of New York, and Nassau National Bank of Brooklyn, vice-president of the Brooklyn Baptist Home, and a trustee of Brooklyn Institute of Arts and Sciences.

Walter D. Rowles

Walter D. Rowles, manager of Bayer Co., New York, dies at his home in Montclair, N. J., Jan. 17, after a year's illness. Born 50 years ago in England, he served an apprenticeship in the drug trade, and came here as a youth being naturalized soon after attaining his majority. After fifteen years with Parke, Davis & Co., upon joining Sterling Products, Inc. he went to England to take charge of their European business. He returned to this country in 1923 as manager of Bayer.

Mr. Rowles was a member of the Montclair Golf Club, Montclair Athletic Club, Canadian Club of Montclair, and Wool Club of New York. He is survived by his widow, a daughter, four sisters in England, and two brothers, Ernest of Chicago, and Herbert A. of Battle Creek.

Dr. Caswell A. Mayo

Dr. Caswell A. Mayo, editor of the publications of The Wm. S. Merrell Co., Cincinnati, dies at his home in Cincinnati Jan. 13 from a sudden heart attack, at 65 years.

Prior to joining the Merrell company seven years ago, Dr. Mayo was editor of the "American Druggist" and assistant editor of the "New York Medical Journal." He held the same position with the "Druggists' Circular" and the "Oil, Paint and Drug Reporter," and was editor of the "Therapeutic Digest" and "Caillard's Medical Journal." He was formerly Dean of the Queen City College of Pharmacy, and for 16 years was a trustee of the College of Pharmacy of Columbia University. He was one of the founders of the New York Pharmaceutical Conference.

Honorary pall bearers selected by Dr. E. F. Kelly, secretary of American Pharmaceutical Association, were Professor John Uri Lloyd, Charles G. Merrell, Charles Ehlers, Henry J. Dusterberg, and Frank H. Freericks.

Frank BeVier, son of the senior member of BeVier & Hartz, Aurora, Ill., dies Jan. 4, in Esconido, Los Angeles surburb. He was 53 years old and disposed of his business interests several years ago when he moved west.

{ *Drugs And The Government* }

Pending enforcement of new regulation governing medicinal specialty imports into Italy, sanitary authorities have become increasingly strict in enforcement of existing regulations so that it is difficult to import American pharmaceutical preparations and medicinal specialites into the country. The new regulations were to become effective Jan. 31. Since this country has no reciprocal agreement with Italy, a special permit is required for each lot of American medicines imported. Heretofore, authorities have been lenient in applying these regulations, but within the past few months they have become exceedingly severe requiring a permit for each individual shipment and even for samples.

Federal Trade Commission will hold hearing March 20 on labeling of soda water flavors. Commission at present opposes use of fruit names on flavors not made from juice of the fruit even in such form as "Imitation Grape Flavor." Case of National Manufacturers of Soda Water Flavors will be presented by Chas. O'Connor, S. Twitchell Co., Phila.; C. H. House, Jacob House & Sons, Buffalo; W. F. Meyer, Warner-Jenkinson Co., St. Louis; and Dr. B. H. Smith, Virginia Dare Extract Co., Inc., Brooklyn.

Federal Trade Commission issues order restraining Leroy A. Kling, John E. Weddell, William R. Durgin, Cecil Widdefield, and Kling-Gibson Co., all of Chicago, from continuing misrepresentations that toilet articles and cosmetics sold by them are compounded in their own laboratories under supervision of a noted physician, designated as "Dr. S. J. Eagan," or that the so-called doctor is originator of formulae for these preparations.

National Wholesale Druggists' Association protests enactment of portion of Section one of H. R. 5766, which would authorize transfer to Public Health Service of any of the agencies of the Department of Agriculture now engaged in administration of Pure Food and Drug Law, the Insecticide and Fungicide law, the Caustic Poison Act or any other statute or regulation bearing upon these general subjects.

Insect powder does not come within the class of products that may be sold by general dealers and therefore must be sold exclusively by registered pharmacists, rules Ohio State Board of Pharmacy. At a recent meeting of the Board this decision was reaffirmed. This ruling does not apply to the sale or distribution of liquid insecticides.

Switzerland's imports of general pharmaceutical products during last year amounted to approximately 17,000,000 francs ($3,281,000). This figure includes prepared medicines to the amount of about 3,000,000 francs. Sales of prepared medicines in the Geneva district alone approximate 2,000,000 francs ($386,000) per year.

Polish Government announces willingness to admit cosmetics of United States origin within the limits of total import contingent reserved for such articles. Import licenses covering articles desired to be imported are necessary for exporters of cosmetics to Poland.

Drug and Food Section of the Sanitary Bureau of the Ministry of Hygiene, Chile, announces that all manufacturers, importers and representatives of pharmaceutical products must solicit permission from that office for the production or sale of such articles.

Bucharest customs office announces new rulings on taxation of imports of natural and synthetic essential oils. Revisions made in shedule now make all oils whether natural synthetic or a mixture, dutiable at rate of 380 lei per kilo.

Herbert R. McIlvaine Again Heads Phila. Drug Exchange

Philadelphia Drug Exchange holds sixty-seventh annual meeting January 24, and re-elects Herbert R. McIlvaine president. Other officers elects were John F. Belsterling, vice-president; Joseph W. England, secretary; A. L. Hilles, Jr., treasurer. Board of directors: C. Mahlon Kline, C. Dunning French, Benjamin S. Thorp, H. K. Hineline, Harrison S. Hires, F. L. Bodman, Walter V. Smith, Alexander C. Ferguson, Jr.

Richard V. Mattison, president of the Keasbey & Mattison Company, and Milton Campbell, president of the H. K. Mulford Company, were reported as having been elected by the board of directors as honorary members of the exchange.

William R. Tucker, secretary, Philadelphia Board of Trade, addressed the meeting on "Federal Taxes and Their Scientific Revision," and Emil P. Albrecht, president, Philadelphia Bourse, spoke on "The Port of Philadelphia." A luncheon was served to the nearly fifty members present.

The annual dinner of the exchange was held January 26 at the Bellevue-Stratford. Addresses were made by Harry A. Mackey, mayor of Philadelphia: Dr. Wilmer Krusen, president, Philadelphia College of Pharmacy and Science, on "Health and Happiness," and John Dennis Mahoney on "Hit and Run in the Drug Business."

Statistical records of exports of foreign commodities rejected under the provisions of the food and drugs act are to be compiled by the Department of Commerce in the future. In order that the necessary data may be obtained promptly and in accurate form, the Department of the Treasury has amended article 314 of the customs regulations of 1923 by the addition of the following paragraph:—

Customs form 7525, shipper's export declaration, must be filed upon the exportation of rejected merchandise previously entered for consumption or for warehouse, and forwarded to the Section of Customs Statistics at New York in accordance with the instructions in articles 19 and 20 of T. D. 38410.

James E. Lilly, vice-president, Eli Lilly & Co., and brother of Eli Lilly, founder of Lilly Laboratories, dies Jan. 31, aged 84. He was born in Lexington, Ky., 1844, and had been associated with the Lilly organization since 1878 when he became the pioneer salesman for the house. In 1881 he became manager of the Kansas City branch of the company, thus gaining the distinction of being manager of the first pharmaceutical branch house in the United States. In 1889 he became general sales manager and in the following year vice-president and director of the corporation, which later offices he held until his death.

E. R. Squibb & Sons products on the Pacific Coast are now under the sales managership of Edward M. Greene Jr. whose headquarters are at San Francisco. Mr. Greene recently returned to San Francisco following a conference with Squibb officials where company policies were discussed. Sales and professional service representatives for the territory have been doubled. Mr. Greene succeeds William Kieft, who resigned Jan. 1 after twelve years with Squibb.

King & Howe, New York, move offices to 99 John St. E. C. DeWitt Osborne, for past twenty years associated with T. A. Hedley, National Drug & Chemical Co., joins the King & Howe organization.

Alsop Engineering Co., New York, publishes new catalogue of "Hy-Speed" portable electric liquid mixers, containing most recent developments in liquid processes.

An international, congress of tropical medicine and hygiene is to be held at Cairo, Egypt, during December.

Lambert Leads Magazine Advertising

Lambert Pharmacal Co. far outstripped other drug manufacturers in the amount of money they expended to advertise "Listerine" products in magazines. The nearest approach to Lambert's purchases of space was Colgate & Co. who spent $600,000 less than Lambert to advertise two lines of products.

The drug manufacturers with appropriations large enough to be included in the 150 leading buyers of magazine space follows:

	1927	1926
Lambert Pharmacal Co.	$2,021,931	$2,158,750
Colgate & Co.	1,470,941	1,970,380
Includes:		
Colgate & Co.	809,955	1,164,281
Pompeian	660,986	806,099
Kotex Co. & Kleenex Co.	1,374,211	982,084
Includes:		
Kotex Co.	1,163,848	.....
Kleenex	210,363	.....
Lever Brothers Co.	1,250,756	1,114,395
Pepsodent Co.	1,202,306	831,794
Lehn & Fink, Inc.	1,146,210	973,916
Includes:		
Pebeco, Inc.	501,094	417,170
Lysol, Inc.	332,610	290,210
A. S. Hinds Co.	312,506	266,536
Bristol-Meyers Co.	1,033,279	818,784
Andrew Jergens Co.	1,017,190	887,950
Palmolive-Peet Co.	989,908	985,908
Wm. Wrigley Jr.	890,694	196,257
Pond's Extract Co.	810,084	762,033
Forhan Co.	649,281	556,367
E. R. Squibb & Sons	643,386	507,526
Sterling Products	445,578	.....
Includes:		
Bayer Co.	166,414	.....
The Charles H. Phillips Chemical Co.	156,956	.....
Centaur Co.	76,181	.....
Danderine Co.	3,656	.....
California Fig Syrup	11,371	.....
R. L. Watkins Co.	404,625	445,090
Mennen Co.	402,132	359,021
Bauer & Black	381,413	306,164
Pro-phy-lac-tic Brush Co.	358,126	315,343
Coty, Inc.	311,964	304,214
J. B. Williams Co.	297,363	258,062
Resinol Chemical Co.	279,395	200,127
Norwich Pharmacal Co.	273,173	245,738
Life Savers, Inc.	251,056	.....
Luxor, Ltd.	207,950	.....
Nujol Laboratories	204,405	179,249

A new mercury antiseptic under the name, "Iozene" is being marketed by Brewer & Co., Worcester, Mass. The product is a two per cent. solution of neutral sodium salt of mono-mercury tetra-iodo-fluorescein, and has been found to destroy a resistant germ strain of Staphyloccus aureus in one minute, while the same strain survived fifteen minutes in carbolic acid diluted 1.70. The product is packed in an extremely attractive package on which the white cap makes a pleasing contrast with the red liquid in the bottle.

Inspired by "The Spirit of St. Louis," Monsanto Chemical Works distributes "The Wings of Progress," an attractive folder predicting an onward march of progress and achievement during 1928 and containing a reproduction in colors of the aforesaid "Spirit."

American Pharmaceutical Manufacturers' Association will hold seventh-sixth annual meeting the week of August 20-25 at Eastland Hotel, Portland, Me. Plans are in charge of Edgar F. Carswell, Gorham, Me., local secretary of the organization.

{ *Coming Meetings* }

Ohio State Pharmaceutical Association. Feb. 20, Dayton, O.
Northwestern Drug Show. Feb. 28-March 2. Des Moines, Ia.
Iowa State Pharmaceutical Association. Feb. 28-March 2. Des Moines, Ia.
Rexall Druggists of Wisconsin. March. Milwaukee, Wis.
United Drug Co. April 10-11. Los Angeles, Cal.
Medical Society of State of North Carolina. April 17. Pinehurst, N. C.
New York State Homeopathic Society. April 24-25, New York.
South Carolina State Medical Association. April. Columbia, S. C.
Kansas Pharmaceutical Association. April. Wichita, Kan.
Rexall Clubs Southern Section. April. Los Angeles, Cal.
Rexall Clubs Pacific Northwest. April or May. Spokane, Wash.
Hawaii Medical Association. April or May. Hilo, Hawaii.
Ohio State Medical Association. May 1-3. Cincinnati, O.
Texas State Medical Association. May 8-10. Galveston, Tex.
Mississippi State Medical Association. May 8-10. Meridan, Miss.
Medical Association of Georgia. May 9-11. Savannah, Ga.
Iowa State Medical Society. May 9-11. Cedar Rapids, Ia.
New Hampshire State Medical Society. May 14-16. Manchester, N. H.
Illinois State Medical Society. May 15-17. Chicago.
American Pharmaceutical Manufacturers Association. May. Chatham Bars, Me.
Nebraska State Medical Association. May. Hastings, Neb.
Ontario Medical Association. May 29-June 1. Kingston, Ont.
Association of Food & Drug Officials of Southern Central States. Spring. Lexington, Ky.
American Pharmalogical Society. Spring. Ann Arbor, Mich.
American Society Biological Chemists. Spring. Ann Arbor, Mich.
American Manufacturers Toilet Articles. Spring. Atlantic City.
Massachusetts Medical Society. June 5-6. Worcester, Mass.
Medical Society of New Jersey. June 6-9. Atlantic City, N. J.
Massachusetts State Pharmaceutical Association. June 8-9. Swampscott, Mass.
American Medical Association. June 11-15. Minneapolis, Minn.
Arkansas State Pharmaceutical Association. June 12-14. Hot Springs, Ark.
Texas State Pharmaceutical Association. June 12-14. Abilene, Tex.
West Virginia State Pharmaceutical Association. June 12-13. White Sulphur Springs, W. Va.
Mississippi State Pharmaceutical Association. June 13-14. Jackson, Miss.
Minnesota State Medical Association. June 18. Minneapolis, Minn.
Kentucky Pharmaceutical Association. June 19-21. Mayfield, Ky.
Missouri Pharmaceutical Travelers Asscoiation. June 19-22. Sedalia, Mo.
New York State Pharmaceutical Association. June 19-22. Saratoga Springs, N. Y.
Wisconsin State Pharmacueucut Assocsation. June 36-28 Green Lake, Wis.
Pennyslvania State Pharmaceutical Association. June 19-21. Buena Vista Springs, Pa.
California Retail Drug Association. June. San Diego, Cal.
Connecticut State Pharmaceutical Association. June. New London, Conn.
Florida State Pharmaceutical Association. June. Ocala, Fla.
Indiana State Pharmaceutical Association. June 3rd week. Culver, Ind.
Ohio State Pharmaceutical Association. June. Columbus, O.
New Jersey State Pharmaceutical Association. June. Atlantic City, N. J.
Nebraska State Pharmaceutical Association. June. Omaha, Neb.

The Financial Markets

Sterling Products Earnings Up For 1927

Last Year's Income Shows Earnings Of $9.70 On Common Stock—1927 Gain In Income Largest Of Any Year In Company's History—Outside Investments Principally In Household Products.

Sterling Products, Inc., reports for year ended December 31, 1927, net income available for dividends of $6,205,436, equivalent to $9.70 a share on the 639,137 shares of no par common stock. This compares with a net for 1926 of $5,413,801, or $8.65 a share on 625,000 shares then outstanding. Sales of the consolidated subsidiaries have been published for the first time, being $20,388,999 for the twelve months to December 31, 1927. Gain in net income for 1927 was the largest of any period in the company's history, the balance for the common stock comparing with $7.84 a share in 1925, $7.56 in 1924, $7.43 in 1923, and $6.58 in 1922.

Surplus accretions for 1927 after dividend payments were $1,847,575, bringing the surplus total to $11,182,195 at the year end. Working capital position at the close of 1927 again is somewhat stronger than at December 31, 1926, current assets of $17,180,095 exceeding current liabilities of $3,015,302 by $14,164,793 net working capital. At December 31, 1926, working capital was $11,461,092, and at the same date in 1925, $9,559,371. Included among the current assets at the close of 1927 were cash of $5,281,202, and miscellaneous high-grade marketable securities of $6,581,731. Inventories of $3,412,771 are but slightly higher than in 1926, with accounts receivable at practically the same level, an encouraging factor from a working capital standpoint in view of the larger amount of business transacted within the year. Investment in affiliated companies increased during 1927 from $4,813,501 to $6,742,039. Majority of the investment in affiliated companies is made up of Sterling Products' interest in Household Products, Inc., of which it holds around 150,000 of the outstanding 575,000 no par common shares.

Capitalization of Sterling Products is made up entirely of 639,137 no par common shares, apart from some $126,850 of preferred stock of a subsidiary organization. Total assets at December 31, 1927, were $36,267,288, of which $9,373,144 consisted of patents, goodwill and other intangibles. At the end of 1926 total as sets were $30,857,180.

Walgreen Stock Sold Privately

Walgreen Co. issue of $4,500,000 6½% cumulative preferred stock was sold privately according to the banking group composed of Hallgarten & Co., Merrill, Lynch & Co., and Shields & Co. The stock carried warrants to purchase two shares of common for each one of preferred, till 1935 at a graduated scale from $27.50 to $50.00 per share. Only $2,712,100 of the issue was publicly offered as holders of the old preferred had the right to subscribe share for share.

The company operates in Chicago, St. Louis, New York, Rochester, Minneapolis, St. Paul, Milwaukee, Memphis, Columbus and Louisville. Besides its own laboratories for manufacture of creams, pastes, perfumes, and pharmaceuticals, the company owns two creameries in Ohio and Illinois, and a large ice cream plant in Chicago.

R. C. Walgreen, president, states the company is the second largest drug chain with one hundred and seventy owned stores, and a controlling interest in nineteen others. The stores operated and the sales are: 1920—19 stores, $1,550,000; 1924—50 stores, $5,586,443; 1926—96 stores, $13,494,878; 1927—135 stores, $20,000,000.

Earnings: 1924, $439,110; 1925, $558,326; 1926, $1,006,206; 1927 (11 months), $1,394,743.

Forhan Earnings Increase

Forhan Co. reports for year ended December 31, 1927, consolidated net profit of $752,932 after federal taxes, etc. Under the participating provisions of the shares this is equivalent to $2.81 a share earned on 150,000 shares of no par Class A stock and $2.21 a share on 150,000 shares of no par common stock, comparing with net profit of $631,204 or $2.40 a share on Class A and $1.80 a share on common in 1926. Earnings for 1927, if applied directly to the Class A stock, are equal to $5.02 a share on 150,000 no par shares, against $4.20 a share on Class A stock in previous year.

Consolidated balance sheet of Forhan Co. and Forhan Sales Co. as of December 31, 1927, follows:

Assets: Machinery and equipment, less depreciation, $87,893; cash, $322,282; marketable securities, $418,431; accounts receivable, $156,911; inventories, $211,038; formulas, trade-marks goodwill, etc., $2,000,000; total $3,196,555.

Liabilities: Capital and surplus (represented by 150,000 no par shares of Class A and 150,000 no par shares of common stocks), $2,925,615; accounts payable, $27,075; dividends payable $97,500; reserve for federal and state taxes, $146,365; total $3,196,555.

Owl Drug Co. reports for year ended Dec. 31, 1927, net earnings of $1,226,643 before depreciation and Federal taxes, as compared with $1,387,773 in 1926. After depreciation, taxes and dividend requirements, there was a deficit of $93,495, as against a surplus of $75,789 in 1926.

Current assets as of Dec. 31, 1927, were $4,516,887 and current liabilities $1,332,687 leaving net working capital of $3,184,200. Total assets and liabilities were $15,393,081, as against $15,858,627 Dec. 31, 1926.

Life Savers, Inc., sells fifty thousand shares of stock to United Cigar Stores Co. A short time ago, Beech-Nut Packing Co. sold a like number to United Cigar Stores. Both want their chewing gums and confections "pushed" by latter organization. As both sales are reported to have been made under market price it seems clear that United Cigar Stores at least has profited by the transactions.

McKesson & Robbins increased earnings for the past year are reflected in an extra dividend of ¾% in addition to the regular quarterly dividend of 1¾% on the preferred, and an extra of 25c per share in addition to the regular quarterly dividend of 25c per share on the common. All these dividends are payable Feb. 10 to stockholders of record Jan. 31

American Chicle Co. reports for year ended December 31, 1927, net income of $1,524,002 after interest, depreciation, federal taxes, etc., equivalent after 7% prior preferred and 6% preferred dividends, to $6.78 a share earned on 185,595 shares of no par common stock. This compares with $1,332,448 or $5.75 a share on common in 1926.

Woodworth, Inc., reports net profit for first eleven months of 1927 of $514,346, comparing with $515,809 for entire year of 1926. This is equal to $4 a share on common stock, after dividend requirements on no-par convertible preference stock, against $3.90 a share earned in 1926.

Coty, Inc., declares stock dividend of 6 per cent. payable Mar. 12 to stock of record Mar. 1, in addition to regular quarterly dividend of $1.25 payable Mar. 30 to stock of record Mar. 16.

Vick Chemical Earns $3.41

Vick Chemical Co. and subsidiary report for six months ended December 31, 1927, net income of $1,375,325 after depreciation Federal taxes, etc., equivalent to $3.43 a share earned on 400,000 no par shares of stock, compared with $1,323,814, or $3.30 a share, in same period of previous year.

Income account for six months ended December 31, 1927, compares as follows:

	1927	1926
Net after depreciation	$1,591,025	$1,533,721
Federal and state taxes	215,700	209,908
Net income	$1,375,325	$1,323,813

Consolidated balance sheet of Vick Chemical Co. as of December 31, 1927 compares as follows:

Assets

	1927	1926
Plants & equipment, less depr	$357,541	$374,516
Emp. stock subscription	7,395	72,656
Sundry accounts receivable	12,306	11,612
Accrued int. & prepaid items	48,281	16,992
Trade-marks and goodwill	1	1
Cash	268,438	438,312
Accounts receivable (current)	352,979	302,343
Inventories	2,324,507	1,410,822
Investments	2,421,227	1,455,251
Total	$4,792,675	$4,081,505

Liabilities

*Capital stock	$2,002,900	$2,002,900
Accounts payable	9,191	15,955
Federal taxes	390,497	367,701
Surplus	2,390,087	1,694,949
Total	$4,792,675	$4,081,505

*Represented by 400,000 no par shares.

Peoples Drug New Record

People's Drug Stores, Inc., establish a new high sales record during 1927 of $8,135,816, exceeding the forecast of M. G. Gibbs, president, made early in the year. This was a gain of 28.7 per cent over 1926 when sales totalled $6,321,119.

December sales, $927,145 were the highest on record, and showed a gain of 23.01 per cent. over December 1926.

The company added only four stores to its chain during 1927, having in operation at the close of the year 50 stores with average sales per store of $162,700, compared with $137,400 in 1926.

Taylor's Drug Co., Ltd., Great Britain, offers 200,000 7 per cent. cumulative preference shares of £ one each to provide funds for discharging debenture and further expansion. Company is said to be largest British owned and controlled manufacturing and retail chemists, operating 193 retail stores in Great Britain. Total capital of company is now £600,000.

Louis K. Liggett Co. sales for 1927 total $58,456,724, against $53,356,140, 1926, and $43,254,376, 1925. December 1927 established record sales month of $5,866,181, against $5,808,636, December 1926, and was also the forty-second month of continued sales increase.

Coty, Inc., reports for the year ended Dec. 31, 1927, net income of $3,341,189, after depreciation and Federal taxes, equivalent to $10.80 a share on the 309,300 no par capital shares outstanding. This compares with $2,943,484, or $9.52 a share in 1926.

Proctor & Gamble declares regular quarterly dividend of $2 per share on common stock payable Feb. 15 to stockholders of record Jan. 25.

{ *New Incorporations* }

Good-Health Products, Cohoes, N. Y. Drugs. Capital 5,000 shares no par common.

Letac Chemical Co., New York, Medicines. Capital 100 shares common.

United Cosmetic Shoppes, New York, Drugs. Capital $400,000 preferred, 1,000 shares common.

Merrell Soule Co., Inc., New York. Delaware charter. Milk products. Capital $1,000,000.

Les Parfums Jutras, Ltd., Montreal, Que. Perfumes. Incorporators: Juliette Trottier, A. Lussier, A. Lebnis, all of Montreal. Capital $5,000.

Vet Products Laboratory, Westbury, N. Y. veterinary remedies. Capital $50,000.

Apex Chemical Co., Apex, N. C. Toilet articles. Capital $100,000. Incorporators: E. V. Kyser, Chapel Hill; L. S. Blades, Elizabeth City; M. W. Blades, E. Apex.

Dethol Manufacturing Co., Richmond, Va., Insecticides. Capital $100,000.

Pneumoguard Chemical Co., Wilmington, Del. Capital $50,000.

Casnati, New York. Toilet articles. Capital $50,000.

Fink & Mende, Paterson, N. J. Dental supplies. Capital $50,000.

C. J. Sultz, Jersey City. Medicines. Capital 100 shares common.

Warren Laboratories, New York. $20,000. W. M. Waldman. Cosmetics.

Laboratoire Desautels, Ltd., Montreal, $45,000 and 9,900 no par shares. Drugs and pharmaceuticals.

Dr. A. W. Chase Co. Delaware, 5,000 shares no par. Drugs, medicines, chemicals.

Warren Laboratories, New York, $20,000. Cosmetics. W. M. Waldman.

Senex Chemical Co. Montgomery, N. Y., $25,000. Drugs.

Sanco Drug Co., Chicago, $30,000. Drugs, drug sundries, chemicals. Jerome Schey, Mitchell Stone, Edward M. Nudelman.

Beacon Laboratories, New York, 200 shares common. Toilet articles. M. H. Hoenig.

Prudential Drug Co., New York, $10,000. S. Poses.

Durex Products, New York, 100 shares common.

Druggists Buying Club of East New York. 100 shares common. S. A. Herzog.

Bloomfield Pharmacy, Newark, $125,000. Ehrenkranz & Kay.

United Toilet Goods Corp., New York, $5,000. S. S. Kogan.

Parke, Davis & Co. of Mexico, Wilmington, $10,000. Drugs, chemicals.

William Wrigley Jr. Co. reports net income for year ended Dec. 31, 1927, of $9,637,575, equal to $5.35 a share on 1,800,000 shares of no par common stock. This compares with $9,100,170 or $5.05 a share for previous year. Net income for quarter ended Dec. 31 was $1,871,349 equal to $1.04 a share, compared with $1.60 a share earned in preceding quarter and 83 cents in final quarter of previous year.

Zonite Products Corp. declares initial quarterly dividend on its new stock of 25c per share payable Feb. 15 to stockholders of record Feb. 4.

Air Reduction Co. and U. S. Industrial Alcohol Co. are not planning a merger according to C. E. Adams, president of the first and chairman of the board of the latter corporation.

Peoples Drug Stores declare regular quarterly dividend of 2% on the preferred payable Feb. 15 to stockholders of record Feb. 1.

Drug Industry Stocks

1928 Jan. 31st Bid	1928 Jan. 31st Asked	1928 High	1928 Low	1927 High	1927 Low	Sales In Jan.	Total Sales 1927	ISSUES	Par $	Shares Listed	An. Rate	Earnings $-per share- 1927	Earnings $-per share- 1926
								NEW YORK STOCK EXCHANGE					
154½	155½	158½	151½	169½	131	178,400	3,604,900	Allied Chem.	No	2,178,109	$4.50		9.79
76⅝	76⅞	78	70⅝	77⅝	43⅝	796,920	8,337,700	American Can	25	2,473,918	2.00		4.31
139	140	140	136½	141½	126	2,660	28,900	pfd	100	412,333	7.00		33.38
71	71¾	73	69	74½	36	10,980	257,800	American Chicle	...	186,595	3.00	6.78	5.75
108	109	110	107	110	90	802	4,313	pfd	...	1,375	7.00	9 mo. 32.53	37.24
13	13⅛	14	13	15½	9⅛	33,220	1,132,800	American Drug Syn.	10	1,000,000	.80	6 mo. 0.52	Nil
65½	66	67½	62½	71	30⅛	46,020	706,100	American Home Products	No	300,000	2.00	4.25	3.69
73½	74	78¼	65½	69½	53⅛	103,580	164,300	Bon Ami A	No	100,000	4.75	5.28	4.75
168¾	169½	187	163½	169	101			Borden Co.	50	630,896	5.00		10.86
57¼	57⅜	58½	54⅛	60½	36	147,100	1,021,700	Canada Dry Ginger Ale	No	450,694	2.00	5.10	3.85
75	76	77	73½	80	46	13,048	122,750	Certo Corp.	No.	300,000	2.50		3.52
133½	133¾	137⅛	127⅞	131	96½	82,400	734,100	Coco Cola	No	500,000	7.00	9.16	16.50
162	165	169½	157½	203	145	20,600	381,600	Corn Sol.	No	217,722	8.00	9.24	14.13
85¼	85½	87½	80¼	86½	58¾	73,160	725,400	Cont. Can	No	620,000	6.00	7 mo. 4.55	6.36
125	126	126	123	126	120	330	3,400	pfd	100	52,930	7.00	7 mo. 47.07	70.55
68⅜	69¼	71⅜	64⅜	68	46⅛	314,700	3,165,500	Corn Products	25	2,530,000	3.00	9 mo. 2.69	4.03
138⅜	140	138½	140⅜	142½	128	1,000	14,400	pfd	100	250,000	7.00	9 mo. 32.50	47.73
134⅜	140	142	123	123	56	73,780	324,100	Coty Inc.	No	309,300	5.00	10.80	9.52
116½	118	120½	116½	118	105½	2,540	35,100	Dupont deb.	100	799,268	6.00	9 mo. 45.45	52.51
314	316	323⅞	310	343⅞	168	39,960	1,996,300	DuPont de Nemours	No	2,661,658	9.50	15.45	13.98
72½	73	74½	68¼	71½	46½	327,620	1,246,500	Fleischmann	No	4,500,000	3.00	9 mo. 3.20	4.08
68	68⅞	69½	65⅝	70⅜	43½	14,840	267,400	Household Prod.	No	575,000	3.50	5.50	5.22
70	70⅜	73½	66½	77½	45⅞	69,400	1,079,600	Kresge	10	3,678,619	1.20	9 mo. 2.44	3.36
115	115⅞	117	113½	118	110½	500	4,363	pfd	100	20,000	7.00	9 mo. 454.79	625.22
86	86⅜	87	79½	88½	66	83,320	1,121,300	Lambert Co.	No	281,250	2.50	7.75	...
40½	41	41½	38	43	32⅜	28,560	524,200	Lehn and Fink	No	265,000	3.00	5.00	5.30
35½	35¾	35½	30½	34½	19¼	49,960	94,900	Life Savers	No	550,000	1.60	2.00	2.27
73½	73¾	77⅜	72	78¼	45	89,700	406,800	Liquid Carbonic	No	125,000	3.60	5.90	11.34
82⅜	84	88	83	90	55	710	15,600	McCrory Stores	No	376,709	1.20	5.26	4.80
129⅞	130	132	117	123½	60⅜	997,600	3,976,800	Montgomery & Ward	10	1,141,251	4.00		6.25
67⅛	68	71⅜	63½	67⅜	59	9,860	13,400	Nat'l Dist pfd.	No	109,795	...	9 mo. 1.62	Nil
34⅜	36	37⅜	34½	46⅜	20	16,860	1,109,900	Park & Tilford	No	200,000	...	9 mo. 2.44	2.67
26⅜	27	28⅜	22⅜	27½	19½	97,800	395,700	Penick & Ford	No	433,773	...	9 mo. 1.48	1.37
126½	127	129⅝	123	126½	92⅜	263,320	2,419,600	Postum Co.	No	1,467,365	5.00	8.50	7.71
78½	80	...	...	71	55		4,110	Prophylactic Brush	No	100,000	4.50	6 mo. 2.88	5.34
51⅞	52	53⅜	50½	57	47	58,860	1,299,100	Schulte	No	1 116,145	8.00	6 mo. 2.41	4.82
83⅜	84	89½	82½	91½	51	226,660	2,821,000	Sears & Roebuck	No	4,200,000	2.50	5.96	5.21
39⅝	39½	40⅜	38⅝	41⅜	35½	210,220	2,274,700	Standard Oil of N. J.	25	24,262,532	1.00		5.01
142	142⅜	150	136	143½	90½	73,060	271,800	Sterling Products	No	625,000	6.00	9.76	8.65
13	13⅛	15½	12⅜	14	7	31,540	28,500	Sweets Am.	50	111,773	...	9 mo. 0.32	0.42
198	199⅜	204⅞	190	200½	159	50,480	404,200	United Drug	100	380,638	9.00	9 mo. 7.87	13.02
59½	59⅝	60⅛	59½	61	58½	13,920	36,600	pfd	50	651,270	3.50	9 mo . 7.40	11.11
106½	106⅝	110½	102¼	111⅛	69	106,680	1,416,500	U. S. Ind. Alc.	100	240,000	5.00		7.04
117⅛	119½	120⅜	119	119	107½	400	785,900	pfd	100	60,000	7.00		35.19
59½	60	61⅜	58	63⅜	48	17,400	384,400	Vick Chem Co.	No	400,000	4.00	6.75	5.39
(1)23⅞	23⅜	25⅜	21½	39⅜	20½	62,760	1,028,300	Vivaudau	No	358,020	3.00	6 mo. 1.85	3.30
97	100	99	97⅜	118⅜	97	340	25,743	pfd	100	16,600	7.00	9 mo. 39.05	79.51
35½	36	36	34½	41½	26	1,900	197,500	White Rock	No	200,000	2.50	5.75	3.82
13½	13⅞	15	11½	17⅜	10	50,620	355,600	Wilson	No	434,983	...		
184½	185½	194	178⅜	198⅜	117⅜	198,440	1,839,900	Woolworth, F. W.	25	2,600,000	6.00		10.81
69½	70	75	69½	72½	50⅛	8,080	92,800	Wrigley	No	1,800,000	3.50	5.35	5.05
								NEW YORK CURB					
(1)13½	13½	15½	13	22	19½	8,000	72,600	Allison Drug Co.	No	.....	...		...
135	144	117½	149½	126	76½	5,520	20,000	Ches Mfg Co.	25	120,000	4.00		...
(1)27½	27½	29	23	26½	17½	14,640	75,100	Forhans	No	150,000	1.00	5.02	...
...	...	23	22	23⅞	18½	2,140	19,600	Hires	No	90,000	2.00	2.53	...
(1)24½	24½	26	20	21⅜	18	9,220	33,200	May Drug Stores	10	10,000	1.50		...
(1)46	44	46	38½	39	37	1,960	2,100	Monsanto Chem.	50	62,000	...	9 mo. 5.17	5.60
(1)44	40⅜	44	38	40	27½	3,140	17,000	Parke Davis & Co.	25	949,577	2.00	1.54	7.50
(1)52	52	54	48	44½	28⅜	6,660	69,800	Peoples Drug Store	No	100,000	1.00		3.51
(1)250	250	265	249	245	178	960	11,835	Proctor & Gamble	20	1,250,000	4.75		9.17
128	127⅞	128⅞	125	130	115⅛	5,330	26,860	Swift & Co.	100	1,500,000	8.00	8.13	10.40
								CLEVELAND					
140	140	140	112½	105	70	214	1,018	Dow Chem Co.	No	100,000	4.00		...
106	107	106	107	106½	100	30	639	pfd	100	18,297	7.00		...
								PITTSBURGH					
24⅜	24⅜	24½	20	22	17½	2,385		May Drug Stores	10	10,000	$1.50		...
								CHICAGO					
43½	43⅜	46	38½	39	37	12,167	26,498	Monsanto Chem.	50	62,000	...	9 mo. 5.17	5.60
130⅜	128½	131½	117½	125⅛	61¼		535,331	Montgomery & Ward	10	1,141,251	4.00		6.25
84	83⅞	89	82½	91⅜	52	50,205	467,296	Sears & Roebuck	No	4,200,000	2.50	5.96	5.21
128	127½	129	124⅞	130	115⅛	7,440	(c)17,417	Swift & Co.	100	1,500,000	8.00		10.43
70	70	74	70	73	51	11,556	123,460	Wrigley	No	1,800,000	3.50	5.35	5.05
						(f)		CINCINNATI					
31½	30	32	31	131	96½	433	15,375	Coco Cola	No	500,000	7.00	9 mo. 9.64	16.5
38	36½	39½	36½	42½	36	945		Dow Drug Co.	100	60,000	8.00		...
126½	126½	126½	126½	126	125	22		pfd	100	40,000	7.00		...
...	...	...	...	126½	113¼	104		Fleischmann	No	4,500,000	2.50	4.30	4.08
253	252	275	249	250	177	4,001	43,825	Proctor & Gamble	20	1,250,000	4.75		9.17
								BOSTON					
128½	127½	128	124⅜	130½	115	1,879	21,143	Swift & Co.	100	1,500,000	8.00		10.4
59⅛	59½	61	59½	61	58½	7,421	23,151	United Drug 1st pfd.					
								DETROIT					
20⅜	20⅜	...	...	16½	14½			Allison Drug Co.	No	.....	...	9 mo. 2.03	...
44	41½	...	...	*145	27			Parke Davis					
								BALTIMORE					
113	112	113	112	114	103	30	788	Sharp & Dohme pfd.	100	1,000,000	7.00		...
Bid	Asked							UNLISTED					
...	...	...	...	29	11			American Solvents	No	160,000	...		...
109	110	109	...	109	102			Kolynos pfd.	100	.....	8.00		...
70	...	72	69	71½	20			McKesson & Robbins	No	100,000	1.00		...
109½	111	111½	109	110	98			M. Kesson & Robbins pfd.		115.000			
77	80	...	...	89	55			Merck pld.					
...	...	...	...	...	...			Mulford, H. K. & Co.	50	54,823	3%		...
141	145	145	114	...	...			Newport Chem.	1	912,198	4%		...
...	...	...	...	131	101			Squibbs	20	40,000	6.00		...
...	...	...	...	...	...			pfd	100	28,354	8.00		...
43	44	...	...	...	...			Zonite Corp.					

(1) High and Low (f) Thru Jan. '28. (*) Old Stock.

Prices Current

Medicinal, Aromatic, and Photographic Chemicals, Crude Drugs, Spices, Essential Oils and Concentrates, Miscellaneous Raw Materials, etc.

Chemical prices quoted are of American manufacturers, spot New York, f. o. b. for immediate shipment, unless otherwise specified.

Products sold f. o. b. works are so specified. Imported chemicals are so designated. Resale stocks, when a market factor, are indicated "second hand."

Crude Drugs and Essential Oils are quoted f. o. b. New York (Manhattan with limitations) for immediate shipment.

The range of price given is not "bid and asked," but are prices of different sellers, based on varying grades and/or quantities. Containers named are original packages most commonly sold.

Acetanilid
Barium Sulfate

Chemicals

Standard Purchasing Power of the Dollar: July 1914 $1.00 - Jan. 1927 68.7c - July 1927 71.7c - Jan. 1928 65.6c

Fine Chemicals

The outstanding development of the past month in the fine chemical market has been an advance in bismuth salts due to the firm position and higher prices prevailing in the metal market. A lower price on tartaric acid, due to reduced prices of argols, was another significant change. Business, in general, has been very quiet following the period of activity which was ushered in with the first of the year. All factors, however, look for increased activity during the next ninety days. As concerns the future, also, the fact that foreign producers of citric acid and citrates have settled their differences and are once more making plans to combine selling forces, is taken to indicate that prices are due to rise.

Acetanilid — Although continued competition among manufacturers of U. S. P. has not led to any decrease in quoted price, it has brought about a condition leading to the shading of their prices in some sources. Demand continues good and in fair volume and there is no indication of change in price.

Acetphenetidin — Heavy demand which has been evident since the Fall continues with prices firm at $1.40 lb. It is expected that the demand will ease off beginning with the latter part of March.

Acid Acetylsalicylic — Producers' prices have been quite generally retained as they have been doing most of the business directly, resale quantities for prompt delivery being rather limited.

Acid Boric — Regular contract movements are proceeding in normal manner with steady price situation dominating the market.

Acid Benzoic — Continues in routine demand moving through regular channels. New business, however, is lacking but prices are held at 60c @ 61c lb.

Acid Carbolic — There is no indication of any variation in the price stability which has become characteristic. Producers seem to feel that price reductions would not effect consumption and hence take their share of business at current prices.

		Current Market	1928 High	1928 Low	1927 Aver.	1914 July
Acetanilid, USP, 200 lb bbls	lb.	.....	.28	.28	.28	.36	.22
Acetone, CP, 350 lb drs	wks.	.....	.15	.15	.15	.14	.10½
Acetphenetidin, 225 lb bbls	lb.	.....	1.40	1.40	1.40	1.53	.80
Acids							
Acid, Acetylsalicylic, 225 lb	bbls.	.85	.90	.90	.85	.85	1918
Agaric, 1 oz vials	oz.	.....	3.50	3.50	3.50	3.50	.....
Arsenous, USP, 220 lb bbls	lb.	.....	.18	.18	.18	.19	.09
Benzoic, USP, 100 lb bbls	lb.	.60	.61	.61	.60	.60	.50
Boric, 100 lb kegs	lb.	.11½	.12	.12	.11½	.11	.07
Cacodylic, 5 lb bot	lb.	.....	8.00	8.00	8.00	8.00	6.00
Camphoric, USP, VIII 1 lb bot	lb.	4.82	4.82	4.82	4.82	5.15	1917
Carbolic, USP, crys 112 lb tins	lb.	.20	.21	.21	.20	.18½	.07½
Chrysophanic, see Chrysarobin							
Cinnamic, 5 lb cans	lb.	3.25	3.50	3.50	3.25	.....	2.20
Citric, USP, crys 230 lb bbl	lb.	.44½	.45	.45	.44½	.44	.53
USP, crys imp, 112 lb keg	lb.	.55	.57	.57	.55	.52	.54
USP, powd 200 lb bbl	lb.	.45½	.46	.46	.45½	.45	.53½
Diethylbarbituric, 1 lb bot	lb.	.....	4.60	4.60	4.60	8.00	23.20
Gallic, USP, 150 lb bbls	lb.	.....	.74	.74	.74	.73	1916
Glycerophosphoric, 25% 1 lb bot	lb.	1.40	1.45	1.45	1.40	1.40	2.00
Hydriodic, USP, 10% 5 lb bot	lb.	.....	.80	.80	.80	.70	.70
Hydrobromic, USP, 40% 155 lb cbys wks	lb.	.....	.55	.55	.55	.55	.40
Hypophosphorous, USP, 30% 5 gal demis	lb.	.....	.85	.85	.85	.85	.45
Lactic, USP, VIII 100 lb cbys	lb.	.56	.62	.62	.56	.57	.45
USP, X 100 lb cbys	lb.	.....	.57	.57	.57	.62	.44
Phenylcinchonic	lb.	.....	4.50	4.50	4.50	4.75	.....
Phosphoric USP, Syr 70 lb drs	lb.	.....	.16	.16	.16	.16½	.20½
Pyrogallic, crys 5 lb cans	lb.	1.40	1.50	1.50	1.40	1.37	1.20
Resublimed, 5 lb cans	lb.	1.80	1.85	1.85	1.80	1.72½	1.20
Salicylic, USP, 100 lb bbls	lb.	.40	.41	.41	.40	.40	.22½
Succinic, 100 lb bbls	lb.	.....	1.35	1.35	1.35	1.55½	2.75
Sulfurous, USP, 6% 100 lb cbys	lb.	.05	.06	.06	.05	.05	1918
Tannic, USP, fluffy 50 lb bbls	lb.	.08	.85	.85	.80	.87½	.50
Powd 200 lb bbls	lb.	.90	.93	.93	.90	.78½	.55
Tartaric, USP, imp 240 lb bbls	lb	.....	.35	.37	.35	.....	.30½
USP, imp 300 lb bbls	lb.	.....	.34½	.36	.34½	.....	.30½
Powd, 240 lb bbls	lb.	.....	.35	.37	.35	.....	.30½
Aconitine, Alk, crys 1 oz vials	oz.	.....	30.00	30.00	30.00	30.00	1918
Amorphous, 1 oz vls	oz.	.....	20.00	20.00	20.00	20.00	1918
Adeps Lanae, hyd 350 lb bbls	lb.	.15	.16	.16	.15	.16	1918
Anhydrous, 350 lb bbls	lb.	.16	.17	.17	.16	.17	1918
Agaricin, 1 oz vls incl	oz.	.....	2.32	2.32	2.32	2.10	.55
Alcohol							
Alcohol, Benzyl, 5 lb bot	lb.	1.45	1.55	1.55	1.45	1.45	.....
Ethyl, USP, 190 pf 50 gal bbls	gal.	2.70½	2.75½	2.75½	2.70½	3.70	2.50
Pure tax free	gal.	.70	.77	.77	.70	2.50	.80
Grain drums	gal.	3.90	4.00	4.00	3.90	3.82½	Nom.
Denatured No. 1 spec. denat. 190 pf 50 gal bbls incl	gal.	.....	.55	.55½	.55	.....	1918
Isopropyl refd 98-99% drs	gal.	1.25	1.50	1.50	1.25	1.25	.....
Phenylethyl, 1 lb bot	lb.	8.00	10.00	10.00	8.00	8.00	.....
Aloin, USP, 100 lb cases	lb.	.90	.95	.95	.90	.90	.68
Aluminum Acetotartrate kegs	lb.	.....	1.60	1.60	1.60	1.60	1.10
Amidopyrine, 10 lb boxes	lb.	.....	4.60	4.75	4.60	4.64	.....
Imported 10 lb boxes	lb.	4.40	4.70	4.90	4.40	4.60	.....
Ammonium Salts							
Ammonium Acetate 100 lb kegs	lb.	.34	.36	.38	.34	.36	.28
Benzoate, USP, 1 lb bot	lb.	.....	1.27	1.27	1.27	1.27	.90
Borate, 10 lb bot	lb.	.....	.35	.35	.35	.35	.60
Bromide, USP, 450 lb bbls	lb.	.48	.50	.50	.48	.48	.48
Imported, 112 lb boxes	lb.	.48	.50	.50	.48	.50½	.49
Carb., USP, lump 100 lb kegs	lb.	.....	.13½	.13½	.13½	.13½	.08½
USP, powd 100 lb kegs	lb.	.....	.14½	.14½	.14½	.14½	.09½
Citrate, 100 lb kegs	lb.	.85	.90	.90	.85	.85	.70
Ichthyolate, as to brand	lb.	4.00	4.50	4.50	4.00	4.85	3.25
Iodide, USP, 25 lb jars	lb.	.....	5.20	5.20	5.20	5.20	3.70
Phosphate, dibasic 250 lb bbls	lb.	.43	.45	.48	.43	.48	.12
Salicylate, USP, 100 lb kegs	lb.	.....	1.15	1.15	1.15	.96½	.40
Valerate, USP, 25 lb jars	lb.	2.75	2.90	2.90	2.75	2.75	1.25
Amylene Hydrate, 1 lb bot	lb.	.....	7.10	7.10	7.10	7.10	5.40
Antipyrine, USP, 100 lb cans	lb.	1.58	1.75	1.75	1.58	1.75	2.00
USP, second hands	lb.	.....	1.65	1.65	1.65	1.65	.....
Apomorphine Hydrochloride, ¼ oz. vials	oz.	.....	35.80	35.80	35.80	23.80	10.40
Arecoline Hydrobrom, 1 oz vials	oz.	7.75	8.75	11.45	7.75	8.37	7.10
Aspirin see Acid Acetylsalicylic							
Aspidospermine Amorphous	oz.	.....	15.00	15.00	15.00	15.00	15.00
Atropine Alk, USP, 1 oz vials	oz.	.....	9.10	9.10	9.10	6.93	7.25
Methyl bromide, 1 oz vials	oz.	.....	25.00	25.00	25.00	25.00	20.00
Sulfate, 5 oz cans	oz.	.....	3.00	3.00	3.00	3.00	6.10
Single ounce	oz.	.....	3.15	3.15	3.15	3.15	6.25
Barium Iodide, 5 lb box	lb.	.....	5.15	5.15	5.15	5.15	4.95
Sulfate, X-ray diagn bbls	lb.	.09½	.10	.10	.09½	.09½	.11

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ACID ACETYLSALICYLIC

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GUAIACOL PREPARATIONS

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45 E. 17th Street, New York

180 N. Wacker Drive, Chicago

Chemicals

Standard Purchasing Power of the Dollar: July 1914 $1.00 - Jan. 1927 68.7c - July 1927 71.7c - Jan. 1928 65.6c

Acid Citric — An increase in the price of imported to 55c @ 57c lb. marks the first tangible result of renewed sales agreements between foreign producers. It seems inevitable that there should be a movement of all citrates to stronger positions and higher prices as a result. Prices of domestic producers continue unchanged.

Acid Glycerophosphoric — Makers report an increase in demand for finished product bringing a consequent increased consumption of the 25 per cent. material. Now being quoted at $1.40 @ $1.45 lb.

Acid Phosphoric — Competition continues keen but without producing any evidence of weakness in the market. The manufacturers' price of 16c lb. has been held firmly throughout the past month.

Acid Salicylic — Conditions continue to be dominated by the manufacturers who have maintained quoted prices. Production continues to follow demand so closely that there is little possibility of price shading although it has been possible to get small lots at somewhat under quoted price.

Acid Tartaric — Reduced prices of argols led to a decrease in price of both domestic and imported grades during the past month. The former is now quoted at 35c lb. and the latter at 34½c @ 35c lb. Recent imports have included 7,800 pounds from Germany. Crude tartar totaling 2,391 bags from France, Java and Chile and 23,810 pounds from Holland have also been noted.

Adeps Lanae — Demand continues unchanged with imports of ample size. No diversion from present prices is expected. Sellers of U. S. P. grade quote hydrous at 15c @ 16c lb. and anhydrous at 16c @ 17c lb.

Alcohol — Conditions during the past month have been quiet but firm. The larger consumers seem to be fairly well covered and there has been little demand for prompt delivery and but few new contracts for future delivery. Under these conditions, the firmness of price is attributable to absence of unsold stocks in the hands of producers. The quotas imposed on producers by Commissioner of Prohibition Doran has evidently had the effect of restraining any competitive production on the part of producers at the expense of lowered prices. Consequently there has been no change in price since those established at the first of the year in accordance with the reduction in Federal tax which took place at that time.

Aloin — Continues very firm with prices ranging from 90c @ 95c lb.

Amidopyrine — Now quoted at $4.40 @ $4.60 lb. according to quantity.

	Current Market	1928 High	1928 Low	1927 Aver.	1914 July
Bay Rum Porto Rico, 45 gal bbls....gal.	.80	.85	.85	.80	.80	.....
Domestic syn. 50 gal bbl....gal	.65	.70	.70	.65	.65	.....
St. Thomas, 50 gal bbls....gal	.80	.85	.85	.80	.81	.....
Benzonaphthol, 5 lb boxes....lb.	2.50	2.60	2.60	2.50	2.50	.89
Benzoyl Chloride, 500 lb dr....lb.	.....	1.00	1.00	1.00	1.00	1.00
Benzyl Benzoate, Medicinal FFC....lb.	.....	1.40	1.40	1.40	1.75	1.25
Chloride Redis, 160 lb cby....lb.	.30	.35	.35	.30	.30	1.50
Formate, 1 lb bot....lb	3.25	3.50	3.50	3.25	3.25	.....
Succinate, 160 lb cby....lb.	.....	5.25	5.25	5.25	4.63	.....
Bismuth						
Bismuth, metal 100 lb cases....lb.	2.20	2.25	2.25	2.00	2.49	1918
Ammon. Citrate, USP, 5 lb cans....lb.	.....	5.65	5.65	5.50	5.70	2.50
Betanaphtholate, 5 lb box....lb.	3.30	3.35	3.35	3.30	3.30	2.80
Citrate, USP, 5 lb cans....lb.	.....	2.95	2.95	2.75	2.81	2.50
Chloride....lb.	.....	3.40	3.40	3.15	3.55	3.15
Hydroxide....lb.	.....	3.30	3.30	3.05	3.12	2.70
Nitrate, 25 lb jars....lb.	.....	1.95	1.95	1.85	1.96	1.45
Oxide anhydrous....lb.	.....	3.70	3.70	3.55	3.61	3.05
Oxychloride, 25 lb boxes....lb.	.....	3.35	3.35	3.10	3.20	2.00
Salicylate, 25 lb boxes....lb.	.....	1.95	1.95	1.80	1.92	1.60
Subcarbonate, USP, 25 lb boxes....lb.	.....	2.70	2.70	2.43	2.98	2.10
Subcarbonate, X-ray diag 1 lb bottles....lb.	.....	3.65	3.65	3.40	3.50	4.09
Subgallate, USP, 25 lb boxes....lb.	.....	2.70	2.70	2.55	2.61	1.65
Subiodide, 5 lb lots....lb.	.....	4.40	4.40	4.20	4.31	3.75
Bismuth....						
Subnitrate, USP, 25 lb jar....lb.	.....	2.30	2.30	2.20	2.30	1.80
Subsalicylate, USP, 25 lb boxes....lb.	.....	3.15	3.15	2.90	3.06	2.05
Tannate....lb.	2.60	2.65	2.65	2.60	2.60	2.00
Borax, crys USP, 400 lb bbls....lb.	.04½	.05	.05	.04½	.04½	.03½
Bromine, N F, 6 lb bot....lb.	.....	.45	.45	.45	.46	.43
Bromoform, USP, 5 lb bot cases....lb.	1.65	1.90	1.90	1.65	1.65	1.05
Brucin Alk., 100 oz tins....lb.	.....	.10	.10	.10	.08	.60
Sulfate, 100 oz tins....lb.	.....	.05	.05	.05	.08	.55
Butylchloral Hydrate bot....lb.	4.00	5.00	5.00	4.00	4.00	2.75
Butyric Ether, absolute 25 lb cans....lb.	1.10	1.20	1.20	1.15	.....	1.15
Cadmium Salts						
Cadmium Bromide, jars 50 lb....lb.	1.15	1.20	1.20	1.10	.....	.85
cases wks....lb.	1.05	1.10	1.10	1.05	1.15	1918
Iodide, 10 lb bot....lb.	.....	4.45	4.45	4.45	4.45	3.50
Metal Sticks, 100 lb. cases....lb.	.65	.75	.75	.65	.67½	.95
Sulfide cases....lb.	1.20	1.25	1.25	1.20	1.20	1.75
Caffeine						
Caffeine Alk, USP, 1....						
100 lb kegs....lb.	2.90	3.05	3.20	2.90	3.14	3.65
Citrated, 50 lb cans....lb.	2.00	2.25	2.25	2.00	2.53	2.60
Hydrobromide, 1 lb bot....lb.	4.80	5.00	5.00	4.65	4.65	1918
Hydrochloride, 1 lb bot....lb.	6.05	6.55	6.55	6.05	6.05	4.25
Sulfate, 1 lb bot....lb.	5.40	5.90	5.90	5.40	5.40	1918
Sodium Benzoate, tins....lb.	.....	3.05	3.05	3.05	3.20	3.15
Salicylate, tins....lb.	.....	2.95	2.95	2.95	3.10	3.15
Calcium Salts						
Calcium Bromide, 100 lb cs....lb.	.....	.60	.60	.60	.60	.58
Carb, USP, 175 lb bbls....lb.	.04½	.06½	.06½	.04½	.06	.06
Glycerophos, 250 lb bbls....lb.	.....	1.40	1.40	1.40	1.40	1.00
Hypophes, USP, 25 lb cans....lb.	.60	.65	.65	.60	.60	1918
Iodide, 5 lb bottles....lb.	.....	4.35	4.35	4.35	4.35	3.60
Lactate, USP, 500 lb bbls....lb.	.45	.50	.50	.45	.52	.38
Lactophosphate Soluble. Crystals tins....lb.	.....	1.20	1.20	1.20	1.20	.78
Powdered tins....lb.	.....	1.00	1.00	1.00	1.00	.78
Insol. powd tins....lb.	.....	.50	.50	.50	.50	.93
Sulfide, USP, 100 lb drs....lb.	.20	.25	.25	.20	.....	.12
Camphor						
Camphor, American Refined 250 lb bbls....lb.	.....	.61	.62	.61	.68	.44½
2½ lb slabs, 100 lb cs....lb.	.....	.63	.64	.63	.71½	.....
1 lb cakes, 100 lb cs....lb	.65	.66	.66½	.65	.73	1918
1 oz tab, 100 lb cs....lb	.....	.70	.71	.70	.72	1918
Jap. ref. slabs, 100 lb cs....lb.	.57	.58	.60	.57	.64	.44½
Refined powd....lb.	.62	.63	.63	.62	.72	.....
½ oz tab, 100 lb cs....lb.	.68	.69	.70	.68	.74	.....
Liniment, bbls....gal.	2.20	2.30	2.30	2.20	2.25	.....
Monobrom, 100 lb cs....lb.	1.85	1.90	1.90	1.85	1.85	1.00
Caramel, 40 gal bbls....gal.	.....	.63	.63	.63	.63	.....
50 gal bbls....gal.	.....	.63	.63	.63	.63½	.....
Carmine, No. 40, 5 lb boxes....lb.	5.00	5.15	5.15	5.00	5.00	2.75
Casein edible, 100 lb kegs....lb.	.45	.55	.55	.45	.45	1918
Chalk						
Chalk drop, 175 lb bbls....lb.	.....	.03½	.03½	.03½	.03	.04
Precip light, 250 lb csk....lb.	.....	.04½	.04½	.04½	.04½	.04
Heavy 540 lb csks....lb.	.02½	.03½	.03½	.02½	.02½	.03
Bulk....ton	.....	5.00	5.00	5.00	5.00	18.00
English, 7 lb bags....lb.	.....	.08½	.08½	.08½	.08½	.04
Charcoal Animal medicinal jars incl....lb.	.....	.50	.50	.50	.50	.....
Charcoal....						
Wood, powd, 100 lb bbls....lb.	.05½	.06	.06	.05½	.05½	.....
Chloramine, USP, 200 lb bbls....lb.	.....	1.75	1.75	1.75	1.75	.....
Chlorcosane, 5 lb bot....lb.	.55	.65	.65	.55	.55	.....
Chloroform, USP, 50 lb drs....lb.	.28	.30	.30	.28	.30	.19
Chloral Hydrate, USP, 25 lb jars....lb.	.70	.75	.75	.70	.77	.34
100 lb drums....lb.	.65	.70	.70	.65	.....	.32
Cholesterin....lb.	4.00	4.56	4.56	4.00	4.00	6.50
Chromium Sulfate Scales, tins....lb.	.55	.60	.60	.55	.55	41
Powdered tins....lb.	.60	.65	.65	.60	.30	.46

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Hydrastine Sulphate
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Colchicine Amorphous
Berberine Sulphate Acid
Arecoline Hydrobromine
Veratrine Hydrochloride
Hydrastine Hydrochloride
Berberine Sulphate Neutral
Strychnine Sulphate Crystal
Strychnine Alkaloid Crystal
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Morphine Sulphate
Guaiacol Carbonate
Hydrastine Alkaloid
Cocaine Hydrochloride
Emetine Hydrochloride
Hyoscine Hydrobromide
Berberine Hydrochloride
Yohimbin Hydrochloride
Pilocarpine Hydrochloride
Hyoscymine Hydrobromide
Hydrastinine Hydrochloride
Strychnine Sulphate Powder
Apomorphine Hydrochloride
Hyoscymine Sulphate Crystals
Ethylmorphine Hydrochloride

THE HOFFMANN LAROCHE CHEMICAL WORKS, INC.

17-19-21 CLIFF STREET, NEW YORK, N. Y.

Standard Purchasing Power of the Dollar: July 1914 $1.00 - Jan. 1927 68.7c - July 1927 71.7c - Jan. 1928 65.6c

Lowered prices have resulted from accumulations of imported material.

Ammonium Acetate—Over abundant stocks induced shading during the past month and finally resulted in a price reduction to 34c @ 36c lb. depending on seller and quantity.

Ammonium Bromide — In very light demand which has occasioned shading of 1c lb. on quoted prices.

Ammonium Phosphate — Weakness in the primary market brought about a reduction in the latter part of January to 43c @ 45c lb., which price is being maintained.

Ammonium Salicylate — Despite keen competition steady demand has kept any trace of weakness out of this market and prices are firm at $1.15.

Antipyrin — Buying is normal with consuming demand in fair volume. Quotations are at $1.58 @ $1.75 depending upon seller and quantity. Accumulations of unsold stocks are sufficient to preclude any immediate possibility of higher price levels.

Arecoline Hydrobromide — Keen competition among importers due to dumping of large quantities by foreign producers, combined with the slight demand which always exists for this substance, led to considerable price cutting during the past month. Quoted prices are now at $7.75 @ $8.75 with material obtainable at more than a dollar below these prices.

Bay Rum — Continues to move steadily and maintain steadily quoted prices.

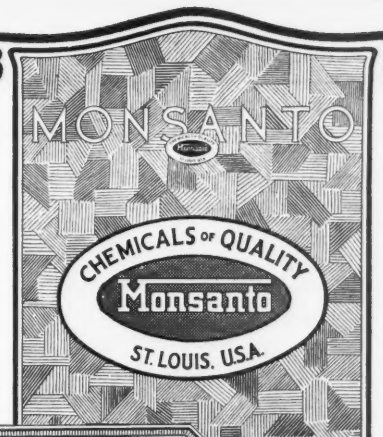
Bismuth Salts — An advance in the price of metal during the past month led to subsequent price advances throughout the bismuth salts. The metal market continues firm at the advanced price and it seems that salt prices will be maintained despite a somewhat slackened demand. Conditions abroad closely approximate those in this country.

Cadmium — The metal continues steady with sticks quoted at 65c @ 75c lb. Salts are consequently steady in the face of steady demand with bromides in jars at $1.15 @ $1.20 and in cases at the works $1.05 @ $1.10; iodide at $4.45; and sulfide at $1.20 @ $1.25.

Caffeine Alkaloid — Intensive competition has led to a decline in price to $2.90 @ $3.05 lb. during the past month. The market is still in very easy condition and further decline seems imminent.

Camphor — The market was in quite a weak position at the end of last month but since then has stiffened in sympathy with the Japanese market. Prices, however, are still about 1c lb. lower than when last reported.

	Current Market	1928 High	1928 Low	1927 Aver.	1914 July
Chrysarobin, 50 lb tins....lb.	3.65	3.75	3.75	3.65	3.65	2.40
Cinchonine Alk, 100 oz tins....oz.	.....	.38	.38	.38	.38	.08
Crystal....oz.	.65	.68	.68	.65	.65	.13
Sulfate, 100 oz tins....oz.	.....	.25	.25	.25	.25	.06
Cinchonidin Sulfate, 100 oz tins....oz.	.....	.35	.35	.35	.35	.15
Resale, 100 oz lots....oz.	.32	.33	.33	.32	.32	.....
Cocaine Alk, USP, 1 oz vial....oz.	.....	11.07	11.07	11.07	10.65	3.85
Hydrochloride, USP, 1 oz vial, 25 oz lots....oz.	.....	8.50	8.50	8.50	.....	2.65
Cocoa Butter, 12 lb boxes....lb	.....	.50	.50	.50	.50	.35
Codeine						
Codeine Alk, 1 oz vials, 10 lots....oz.	.....	10.87	10.87	10.87	9.90	5.75
Hydrobromide....oz.	.....	7.92	7.92	7.92	7.92	5.50
Hydrochloride....oz.	.....	9.87	9.87	9.87	8.90	5.50
Nitrate, oz vl 10 oz lots....oz.	.....	8.80	8.80	8.80	8.80	5.50
Phosp. oz vl, 10 oz lots....oz.	.....	8.42	8.42	8.42	7.60	5.25
Salicylate....oz.	.....	7.25	7.25	7.25	7.25	5.25
Sulfate, oz vl, 10 oz lots....oz.	.....	8.92	8.92	8.92	7.69	5.50
Cod Liver Oil						
Cod liver Oil Nor., 30 gal bbls....bbl.	38.00	40.00	40.00	38.00	38.25	17.00
Newfoundland....bbl.	.....	46.00	46.00	46.00	45.60	62.50
Colchicino Alk, USP, 1 oz vl....oz	.....	20.00	20.00	20.00	20.00	28.15
Salicylate, 1 oz vls....oz	.....	35.50	35.50	35.50	35.50	20.00
Collodion, USP, 30 lb drs....lb.	.....	.23	.23	.23	.23	.22
600 lb drums....lb.	.....	.22	.22	.22	.22	.27
Flexible drums....lb.	.24	.25	.25	.24	.24	.33
Copper Acetate Normal, CP, jars incl....lb.	.....	.75	.75	.75	.75	.35
Arsenite, tins....lb.	.....	.39	.39	.39	.40	.75
Iodide, 5 lb bot....lb.	.....	5.65	5.65	5.65	5.65	4.40
Corn Syrup, 42 deg. 50 gal bbls....100lb	3.41	3.66	3.66	3.31	3.31	2.16
Cream Tartar, USP, 300 lb bbls....lb.	.26¾	.27	.27	.26	.25	.24
Imp. powd. 224 lb bbls....lb.	.25¾	.26	.27¾	.25¾	.25	.24
Creosote, USP, 42 lb cbys....lb.	.40	.42	.42	.40	.40	.51
Carbonate, 150 lb....lb.	1.55	1.60	1.60	1.55	1.60	1917
Cresol, USP, 400 lb drums....lb	.....	.20	.20	.20	.22	.53
500 lb drums....lb.	.....	.20	.20	.20	.21	.07
Diethyl Phthalate, 25 lb cn....lb.	.....	.40	.40	.40	.40	.....
1000 lb drums....lb.	.24	.25	.25	.24	.27	.....
Digitalin						
Digitalin Pure, 1 oz vial....oz.	15.00	15.50	15.50	15.00	10.63	6.25
Dionin, see Morphine Ethyl	.....	.....	.....	.....	.....	.....
Dover's Powder, USP, 5 lb tin....lb.	.....	1.65	1.65	1.65	1.65	26.00
Duboisine Sulfate, 1 oz vl....oz.	.....	30.07	30.07	30.07	30.85	1918
Emetine Alk, 15 gr vial....oz.	.....	.85	.85	.85	.07	45.00
Hydrochloride, USP, 1 oz vl....oz.	35.00	36.00	36.00	35.00	32.70	1.80
15 grain vials....oz.	2.50	2.70	2.70	2.50	2.50	1.00
Epsom Salts, USP, 200 lb bbls....100 lb.	2.25	2.50	2.50	1.85	1.95	1.00
Imp. 100 lb bbls....100 lb.	1.95	2.00	2.00	1.95	7.60	5.50
Ergotin Bonjean, 1 lb jars....lb.	.....	35.00	35.00	35.00	35.00	41.50
Eserine Alk, 1 oz vials....oz.	.....	40.00	40.00	40.00	40.00	25.50
Salicylate, 1 oz vials....oz.	.....	40.00	40.00	40.00	40.00	25.50
Sulfate, USP, VIII 1 oz vials....oz.						
Ether						
Ether, USP, 55 lb drums....lb.	.....	.15	.15	.15	.13	.16
Anaesthesia, 55 lb drums....lb	.....	.20	.20	.20	.19	.16
USP, 1880 55 lb drums....lb	.....	.37	.37	.37	.....	.24
Nitrous, 1 lb bot....lb.	.....	.95	.95	.95	.91	.48
Ethyl Chloride, 200 lb bot....lb.	.24	.25	.25	.24	.....	.....
Ethyl Iodide, 5 lb bot....lb.	.....	6.25	6.25	6.25	6.25	4.75
Formaldehyde, USP....						
100 lb cbys 1c-1 wks....lb.	.08	.09	.09	.08¾	.11	.09½
Furfural, 500 lb drums....lb.	.....	.17½	.17½	.17¼	.17½	.....
Gall Extract....lb.	.20	.21	.21	.20	.20	.....
Gelatin, USP, Silver, 100 lb. cs....lb.	.55	.60	.60	.55	.60	.....
Pure Food, 50 lb bbls....lb.	.53	.55	.55	.53	.55	.....
Sheets....lb.	.....	.....	.....	.....	.53	.....
Glucose, (grape sugar) dry 70° bags c-l NY..100 lb.	3.14	3.24	3.24	3.14	3.14	.....
Glycerin						
Glycerin, CP, 550 lb drums....lb.	.17½	.18	.19	.17½	.25	.19¼
Goa Powder, see Chrysarobin....						
Glycyrrhizin Ammon, tins....lb.	.....	3.00	3.00	3.00	3.00	1.85
Gold Chloride, bottles....oz.	12.00	12.50	12.50	12.00	12.00	10.15
Guaiacol, liq. USP, 100 lb cbys....lb.	1.75	2.25	2.25	1.7	1.75	1.60
Crystals....lb.	2.25	2.50	2.50	2.25	2.25	2.75
Benzoate, 1 lb bottles....lb.	.....	13.00	3.00	13.00	13.00	.....
Carbonate, 5 lb boxes....lb.	.....	2.50	2.50	2.50	2.50	2.55
Haarlem Oil, bot 6 gr cases....gr	.....	3.25	3.25	3.25	3.25	1.67
Imported, 5 gross cases....gr.	.....	3.50	3.50	3.50	3.50	1.65
Halazone, 5 lb bot....lb.	2.75	3.25	3.25	2.75	2.75	.....
Hexamethylene						
Hexamethylenetetramine, USP, 100 lb drums....lb.	.52	.56	.56	.52	.60	1918
Homatropine Hydrobrom, USP....oz.	.....	14.50	14.50	14.50	14.50	87.00
5 oz and 1 oz vials....oz.	.....	13.50	13.50	13.50	13.50	87.00
Hydrastine Alk, USP, 1 oz vial....oz.	20.50	21.00	21.00	20.50	20.50	21.50
Hydrochlide, USP, 1 oz vials....oz.	20.50	21.00	21.00	20.50	20.50	21.50
Sulfate, 1 oz vial....oz.	22.50	23.00	23.00	22.50	25.07	22.50
Hydrastinine Hydrochloride, USP, 15 gr vials...oz.	.....	40.00	40.00	40.00	40.00	.....
Hydrogen Peroxide, USP, soln 375 lb bbls....lb.	.04	.05	.05	.04	.04	.03½
Hyoscine Hydrobrom, USP, 1 oz vials....oz.	.....	13.57	13.57	13.57	13.57	51.00
5 oz, 1 oz vials....oz.	13.07	13.57	13.57	13.07	13.07	.....
Hyoscyamine Alk, crystals, 1 oz vials....oz.	.....	25.07	25.07	25.07	25.07	14.00
Amorphous, 1 oz vial....oz.	.....	75.07	75.07	75.07	75.07	55.00
Hyoscyamine						
Hydrobromide, USP, 1 oz vial....oz.	.....	35.07	35.07	35.07	35.07	13.00
Sulfate, 1 oz vial....oz.	.....	25.07	25.07	25.07	25.07	13.00
Hypoquinone, 100 lb kegs....lb.	.....	1.25	1.25	1.25	1.25	.53
Ichthyol, tins....lb.	4.00	4.25	4.25	4.00	4.00	1918
Iodide Arsenous, 5 lb bot....lb.	.....	5.20	5.20	5.20	5.20	3.70
Arsenous-Mercuric soln, 5 lb bottles....lb.	.....	.26	.26	.26	.26	.16



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Standard Purchasing Power of the Dollar: July 1914 $1.00 - Jan. 1927 68.7c - July 1927 71.7c - Jan. 1928 65.6c

Chloramine — Factors report substantial increase in consumption with prices unaffected and in firm position at $1.75.

Codeine — Demand proceeds in a routine manner with no evidence of weakness in price. All sales are being made on the recently established schedule. The primary raw material market is likewise in firm position.

Cocoa Butter — Although in fairly good demand, the market is somewhat easier. Now quoted at 46c @ 48c lb.

Cod Liver Oil—First reports from Norway upon the opening of the fishing season indicate that yield so far is not up to average. Stormy weather is handicapping fishers, and lean livers, containing comparatively little oil, seem to predominate. Preliminary estimates indicate that it will require 450 livers per hectoliter of oil while last year the same quantity was produced by 300 livers. Spot prices continue at $38.00 @ $40.00 bbl.

Corn Syrup — An increasing scarcity has brought about a stronger position in all corn products. Accordingly the price of syrup advanced to $3.41 @ $3.66 per 100 lbs. which level is being held in a strong market.

Cream Tartar — Lower prices of argols abroad resulted in a lower market during the past month. Large quantities of crude tartar from France, Java, Chile and Holland.

Diethyl Phthalate — Consumers are not very active lately but prices are being held by local sellers. Factors are unable to account for dullness of demand and refuse to make any concessions. Quotations are now at 40c lb. in cans and 24c @ 25c lb. in drums.

Epsom Salts — The formation of an epsom salt cartel by six of the larger German producers and the resulting price and selling agreements, caused higher prices in this market during the past month. Imported is now quoted at $1.95 @$2.00 cwt. and domestic at $2.25 @ $2.50 cwt.

Formaldehyde — Lower prices on primary market and lack of export demand failed to bring about many price reductions during the past month. Producers seem confident that the present price of 8¾c @ 9c lb. will hold.

Glycerin — The past month has witnessed a further decline in price and a stagnant condition in the market. Unable to agree on a price, sellers seem content to wait it out. Meanwhile stocks continue to accumulate. While other grades have eased off considerably, U. S. P. has declined only ½c lb. since last reported. More business is being done in this grade than in any of the others.

		Current Market	1928 High	1928 Low	1927 Aver.	1914 July
Iodine, crude, 200 lb kegs	lb.	4.20	4.25	4.25	4.20	4.20	3.30
Resublimed, 10 lb tars	lb.	4.65	4.70	4.70	4.65	4.65	3.55
Tincture demis	gal.	4.55	4.65	4.65	4.55	4.65	.....
Iodoform, powd 10 lb bot	lb.	....	6.00	6.00	6.00	6.00	4.00
Iron Salts							
Iron & Ammonium Citrate, USP, 50 lb cans	lb.	.64	.66	.66	.64	.67½	.54½
& Ammonium Oxalate, 25 lb box	lb.	.36	.38	.38	.36	.36	.28
& Ammonium Sul, CP, jars incl	lb.	.....	.25	.25	.25	.27	.20
Bromide	lb.	1.10	1.22	1.22	1.10	1.10	.65
Carbonate Mass, (Blaude 100 lb bags)	lb.	.....	.18	.18	.18	.30	.18
Cacodylate, 100 lb bot	lb.	.....	7.50	7.50	7.50	8.00	16.00
Chloride, USP, lump 400 lb bbls	lb.	06	.08	.08	.05½	.05½	.06½
Citrate, USP, VIII 25 lb can	lb.	.94	1.01	1.01	.94	.94	.55½
Hypophosphite, 5 lb cans	lb.	1.55	1.65	1.65	1.55	1.55	1.10
Iodide, 1 lb bottles	lb.	.....	4.28	4.28	4.28	4.28	2.40
Nitrate, kegs	lb.	.....	.36	.36	.36	.09	.50
Oxalate, Scales, 25 lb cans	lb	.....	.65	.65	.65	.88	.....
Phosphate, USP, 50 lb cans	lb.	.....	.69	.69	.69	.69	.54½
& Potas Oxalate, 250 lb bbl	lb.	.....	.49	.49	.49	.49	.26
& Potas Tartarte, tins	lb.	.....	.88	.90	.90	.88	.55
Pyrophosphate, USP, 50 lb	lb.	.74	.80	.80	.74	.74	.54½
& Sod Oxalate, 24 lb box	lb.	.....	.30	.30	30.	.32½	.28
Sulfate, USP, crys bbls	lb.	.04½	.04	.04	.04½	.04½	.03½
Ferrous dried bbls	lb.	.....	.08	.08	.08	.08	.06
Valerate, tins	lb.	2.75	3.00	3.00	2.75	2.75	1.30
Jalap Resin, USP lumps, 5 lb tins	lb.	.....	4.00	4.00	4.00	4.00	.....
Powdered, tins	lb.	....	4.65	4.65	4.65	4.65	.....
Lead Acetate, USP, 100 lb kegs	lb.	.15	.18	.18	.15	.15½	.14
Iodide, USP, VIII 5 lb bot	lb.	3.20	3.40	3.40	3.20	3.20	2.50
Lecithin, 5 oz jars	oz	1.00	1.30	1.30	1.00	1.00	.95
Licorice Ext Mass, cases	lb	.14	.20	.20	.14½	.14½	1918
Compound powder, bbls	lb.	.11	.13	.13	.11	.11	.16½
Powdered	lb.	.28	.34	.34	.28	.27	.29
Lithium Carbonate, 250 lb bbls	lb.	1.50	1.60	1.60	1.50	1.50	.67
Citrate, USP, 100 lb kegs	lb.	.....	1.70	1.70	1.70	1.70	1918
Iodide, 5 lb. bottles	lb.	.....	5.40	5.40	5.40	5.40	4.10
Lobeline Sulfate, ¼ oz vial	oz.	.....	8.75	8.75	8.75	6.25	.....
Luminal, see Phenylethylmalonylurea		.....					
Magnesium Salts							
Magnesium Carbonate, USP, 100 lb bbls	lb.	.....	.12	.12	.12	.12	.05½
English, oz blocks	oz.	.16	.18	.18	.16	.....	.....
Glycerophosphate, 5 lb tins	lb.	3.20	3.25	3.25	3.20	3.20	2.13
Hypophosphite, 5 lb cans	lb	.....	1.05	1.05	1.05	1.05	1.15
Oxide, USP, light 100 lb bbls	lb.	.....	.42	.42	.42	.42	.22
USP, heavy 250 lb bbls	lb.	.....	.50	.50	.50	.50	.27
Salicylate, 100 lb kegs	lb.	....	1.10	1.10	1.10	.49	.70
Stearate, bbls	lb	.23	.25	.25	.23	.23	.....
Manganese Dioxide, precip. 100 lb kegs	lb	.40	.50	.50	.40	.....	.40
Glycerophosphate, 5 lb tins	lb.	2.90	3.00	3.00	2.90	2.90	1918
Hypophosphite, USP, VIII 5 lb cans	lb.	1.35	1.40	1.40	1.35	1.35	1.10
Iodide, 1 lb bottles	lb	6.40	6.65	6.65	6.40	6.40	4.35
Sulfate, N. F.	lb.	.....	.27	.27	.27	.27	.26
Menthol, USP, 60 lb cases	lb.	4.25	4.50	4.50	4.25	4.30	2.95
Synthetic, cases	lb.	....	3.25	3.25	3.25	3.3⁷½	.....
Mercury							
Mercury Metal, 75 lb flasks	fl.	122.00	123.00	127.00	122.00	116.67	37.50
Bichloride, crys 25 lb box	lb.	.....	1.81	1.81	1.81	1.58	.55
Gran powd, 100 lb kegs	lb.	.....	1.65	1.65	1.65	1.51	.52
Bisulfate, 25 lb boxes	lb.	.....	1.62	1.62	1.62	1.57½	.42
Blue Mass, 25 lb boxes	lb.	.....	1.03	1.03	1.03	.90	.40
Powd, 25 lb boxes	lb.	.....	1.04	1.04	1.04	.95	.45
Blue Ointment USP, 50%, 25 lb cans	lb.	.....	1.29	1.29	1.29	.87½	.....
Dilute 30%, 25 lb cans	lb.	.....	.92	.92	.92	.86½	35
33⅓% mercury	lb.	.....	.94	.94	.94	.35	.35
Calomel, 50 lb boxes	lb.	.....	2.05	2.05	2.05	1.88	.60
English	lb.	2.75	2.80	2.80	2.75	1.90	.58
Iodide, green, 25 lb jars	lb.	.....	4.80	4.80	4.80	4.54	2.45
Red, USP, 25 lb jars	lb.	.....	4.89	.489	4.89	4.61	2.70
Yellow, USP, VIII, 25 lb jars	lb.	4.80	4.80	4.80	4.80	4.50	2.45
Red precip, USP, 25 lb boxes	lb.	2.17	2.17	2.17	2.17	1.92	.75
Powd., USP, 25 lb boxes	lb.	2.17	2.17	2.17	2.17	1.98	.81
White precip, USP, 25 lb boxes	lb.	.....	2.20	2.20	2.20	2.03	.75
Powd., USP, 25 lb boxes	lb.	.....	2.25	2.25	2.25	2.25	.81
Salicylate, 25 lb bot	lb.	.....	2.32	2.32	2.32	2.32	1.50
With chalk, USP, 25 lb boxes	lb.	.....	.93	.93	.93	.87	.39
Methanol (Wood Alcohol), Pure 1c-1 drs	gal.	.....	.60	.60	.60	.....	.....
Methyl Salicylate							
Methyl Salicylate, USP, 50 lb cans	lb.	.....	.42	.42	.42	.45	1918
Methylene Blue, USP, med 5 lb cans	lb.	2.00	2.05	2.05	2.00	1.70	1.00
Milk powd, 150 lb bbls	lb.	.14	.15	.15	.14	.14	.11
Morphine Alk, USP, 5 oz tin	oz.	.....	10.15	10.15	10.15	9.32	1918
Acetate, 5 oz tins	oz.	.....	8.25	8.25	8.25	7.41	5.30
Hydrobromide, 5 oz tins, 10 oz lots	oz.	.....	8.35	8.35	8.35	7.52	5.50
Hydrochloride, 5 oz tins, 10 oz lots	oz.	.....	8.35	8.35	8.35	7.52	5.30
Ethyl Hydrochloride, 5 oz tins, 10 oz lots	oz.	.....	9.85	9.85	9.85	9.00	6.45
Sulfate, 5 oz tins, 10 oz lots	oz.	.....	8.35	8.35	8.35	7.35	4.95
Naphthalene Flake, 175 lb bbls wks	lb.	.04½	.05	.05	.04½	.04½	.02½
Balls, 250 lb bbls wks	lb.	.05½	.06	.06	.05½	.05½	.02½
Oil Mineral White, 50 gal bbls 80-85 vis	gal.	.60	.65	.65	.60	.67	.....
85-90 vis	gal.	.65	.70	.70	.65	.65	.....
125-130 vis	gal.	.70	.80	.80	.70	.71	.....
290 vis	gal.	1.00	1.10	1.10	1.00	.99	.....
Oil Mineral							
Russian 110-115 vis	gal.	.70	.75	.75	.70	.72	.....
150-155 vis	gal.	.67	.77	.77	.67	.76	1918
325-335 vis	gal.	.85	.90	.90	.80	.86	.30

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Chemicals

Standard Purchasing Power of the Dollar: July 1914 $1.00 - Jan. 1927 68.7c - July 1927 71.7c - Jan. 1928 65.6c

Haarlem Oil — Activity has improved in the shape of increased demand and purchasing in larger quantities. The market is firm at quoted prices.

Hexamethylenetetramine—Although there has been a price reduction in the primary market, this is held at previously quoted prices with producers agreed on the fact that present prices will be held.

Iron Chloride — Moved into a stronger position with subsequent price advance during the latter part of January. Now being quoted at 6c @ 8c lb.

Manganese Dioxide — Precipitated weakened somewhat so that U. S. P. could be obtained on spot as low as 40c lb. Now being quoted at 40c @ 48c lb.

Menthol — Although the Japanese market has been firm for the past two months, with no indications of weakness or decline, competition and the presence of a few small lots have held prices in this country as low as 30c below the Japanese market. The Japanese market is now at the equivalent of $4.30 lb. while it has been possible to buy at $4.15 here. It is felt, however, that this is, but a temporary condition and hence quoted prices are the same as those given last month—$4.25 @ $4.50 lb.

Mercury — The gradual decline has continued during the past month and quotations are now at $122 @ $123 per flask. London quotations are also lower at £21 17s. 6d. which at present rate of exchange and plus duty is equivalent to $124.50 per flask. Most factors are predicting increased volume of sales within near future. The market, however, is weak and this weakness should predominate during the year due to the fact that competition between producers is leading to overproduction, estimated at 45,000 flasks. Stocks in bonded warehouses Nov. 30 totaled 375,515 flasks as compared with 267,988 flasks October 31. The accumulation is plainly evident even over that short period.

All evidence to the contrary, the mercurials maintain quoted prices although the market is weak, especially in calomel. At the present outlook a price decline is inevitable although it may be postponed for some time.

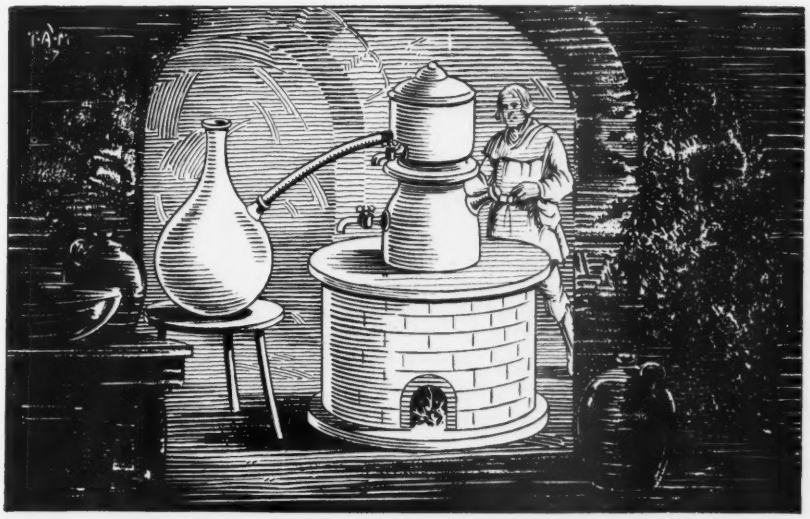
Oil Mineral — Although prices continue firm, the strength exhibited a few months ago has yielded to a more quiet attitude.

Phenolphthalein — Prices are firm at $1.10 @ $1.20 in drums and $1.23 @ $1.30 in five pound cans, with consumers buying in round lots.

Potassium Iodide — The market is still weak has recovered somewhat from

		Current Market		1928 High	1928 Low	1927 Aver.	1914 July
Oxgall, Purified, 5 lb bot	lb.	1.75	2.50	2.50	1.75	2.00	1918
USP, 5 lb bot	lb.	2.00	2.50	2.50	2.00	1.75	1.44
Oxyquinoline Sulfate, tins	lb.	8.50	9.25	9.25	8.50	8.50	.....
Pancreatin, USP, 5 lb bot	lb	.....	2.50	2.50	2.50	2.44	2.97
Paraffin, refd, 200 lb cs slabs 118-120 deg M P.	lb.	.08	.09	.09	.08	.08	.....
128-132 deg M P.	lb.	.07½	.07½	.07½	.07½	.07½	.....
Para-Aldehyde, USP, 100 gal drums	lb.	.67	.77	.77	.67	.67	.38
Paraformaldehyde, USP, 100 lb cases	lb.	.45	.47½	.47½	.45	.50	.40
Pepsin, USP, 5 lb bottles, 1:3000	lb.	.....	2.50	2.50	2.50	2.45	2.50
1:6000	lb.	.....	5.00	5.00	5.00	4.90	5.00
1:10000	l'q	.....	..835	8.35	8.35	8.18	8.25
Peptone, powd, 5 lb bot	lb					1 71	1.42
Petrolatum							
Petrolatum, Lily White, USP, 400 lb bbls	lb.	.09	.10	.10	.09	.09	.07
Snow White, USP, 400b bbls	lb	.12½	.13½	.13½	.12½	.12½	.10
Phenolphthalein, USP, 100 lb drums	lb.	1.10	1.20	1.20	1.10	1.27	1918
5 lb cans 100 lb lots	lb.	1.23	1.30	1.30	1.23	1.37	1.15
Phenylethylmalonylurea, 1 oz pkg	oz.	.....	5.50	5.50	5.50	5.50	.....
Pilocarpine Hydrochloride, USP, 1 oz vials 25 oz. lots	oz.	.....	3.25	3.25	3.25	3.25	2.45
Nitrate, 25 oz lots	oz.	.....	3.25	3.25	3.25	3.25	2.45
Single ounce	oz.	.....	4.50	4.50	4.50	4.50	2.55
Alkaloid, 15 gr vials	vl.	.....	.75	.75	.75	.75	.50
Piperazine Hydrate, 1 lb bot	lb	.....	15.00	15.00	15.00	15.00	.....
Piperadine, 25 oz bottles	lb	.....	8.00	8.00	8.00	8.00	.....
Popodhyllin 5 lb bottles	lb.	.....	4.50	4.50	4.50	4.50	2.82
Second hands	lb	3.90	4.00	4.00	3.90	3.96	.....
Potassium Salts							
Potassium Acetate, USP, 100 lb kegs	lb.	.29	.30	.30	.29	.29	.16
Bicarb, USP, crys 320 lb bbls	lb.	.08½	.09	.09	.08½	.13	.06½
Bromide, USP, crys 100 lb cs	lb	.42	.43	.43	.42	.45½	.39
Citrate, USP, 50 lb bbl	lb.	.51	.55	.55	.51	.51	.47
Guaiacol Sulfonate	lb	1.95	2.25	2.25	1.95	1.81	1.85½
Hypophosphite, 10 lb cans	lb	.80	.85	.85	.80	.80	.61
Iodide, USP, 100 lb cases	lb.	3.25	3.50	3.60	3.25	3.54	2.95
Lactophosphate, 4 oz bot	lb.	.....	.90	.90	.90	.90	1.25
Permangan, USP, crys, 100 lb drs wks	lb.	.15	.16½	.16½	.15	.15	.09½
Phosphate dibasic pure, kegs	lb.	.....	.49	.49	.49	.54	.25
Salicylate, 25 lb cans	lb.	.....	1.18	1.18	1.18	.94	.50½
Sulfate, USP, VIII, 100 lb kegs	lb	.13	.15	.15	.13	.15	.05
Sulfocyanide, CP 15 lb jars	lb.	.....	.50	.50	.50	.50	.44
Tartrate, CP, tins	lb	.....	.65	.65	.65	.65	.36
Pyrogallol, USP, see Acid Pyrogallic							
Quinidine Alk, 100 oz tins	oz.	.70	.75	.75	.70	.70	.35
Sulfate, 100 oz tins	oz	.....	.50	.50	.50	.50	.23
Quinodine, see Chinodin							
Quinine Salts							
Quinine Sulfate, USP, American 100 oz tins	oz.	.....	.40	.40	.40	.50	.26
1 oz tins, 100 oz lots	oz	.....	.47	.47	.47	.57	.26
Dutch, 100 oz tins	oz.	.....	.40	.40	.40	.50	.....
Java, 100 oz tins	oz.	.....	.40	.40	.40	.40	.25
Japanese 100 oz tins	oz.	.....	.40	.40	.40	.40	.....
Quinine Acetate	oz	.....	.78	.78	.78	.78	.54
Arsenate	oz.	.....	.78	.78	.78	.78	.49
Benzoate	oz	.....	.78	.78	.78	.78	.....
Bisulfate, USP	oz.	.....	.40	.40	.40	.40	.26
Resale	oz.	.37	.39	.39	.37	.37	.....
Citrate	oz.	.....	.51	.51	.51	.51	.46
Dicarbonate, 1 oz tins	oz.	.....	2.56	2.56	2.56	2.51	.....
Dihydrobromide	oz.	.....	.54	.54	.54	.54	.42
Dihydrochloride, USP	oz.	.....	.54	.54	.54	.54	.48
Ethyl Carbonate, 16 oz tins	oz.	.....	.58	.58	.58	.62	1.15
Ferrocyanide	oz.	.....	.78	.78	.78	.72	.48
Formate	oz.	.....	.73	.73	.73	.73	1.16
Glycerophosphate	oz.	.....	.80	.80	.80	.80	.93
Hydrobromide, USP	oz.	.....	.50	.50	.50	.50	.44
Hydrochlorosulfate	oz.	.....	.54	.54	.54	.54	.54
Hydrochloride & Urea, USP	oz.	.....	.74	.74	.74	.75	.49
Hypophosphite	oz.	.....	.70	.70	.70	.70	.49
Lactate	oz.	.....	.66	.66	.66	.66	.49
Phenolsulfonate	oz.	.....	.78	.78	.78	.78	.37
Phosphate	oz.	.....	.62	.62	.62	.62	.45
Salicylate, USP	oz.	.....	.52	.52	.52	.52	.43
Tannate, USP	oz.	.....	.41	.41	.41	.41	.31
Tartrate	oz.	.....	.78	.78	.78	.78	.44
Valerate	oz.	.....	.78	.78	.78	.78	.49
& Urea Hydrochloride, USP	oz.	.....	.88	.88	.88	.88	.57
Rennet, N. F. 5 lb 1:25,000	lb.	2.95	3.50	3.50	2.95	2.95	.....
Resorcinol							
Resorcinol, USP, 25 lb cans	lb.	1.70	1.75	2.00	1.70	1.85	.80
Rochelle Salt, USP, 225 lb bbl	lb.	.23	.23½	.23½	.23	.22	.17½
Imp, USP, 300 lb bbls	lb.	.....	.23	.23	.23	.21	.18
Rock Sugar, 5 lb boxes	lb.	.....	.15	.15	.15	....	.....
Saccharin, USP, 10 lb cans	lb.	1.70	1.80	1.80	1.70	1.70	2.25
USP, Soluble, 10 lb cans	lb.	1.75	1.85	1.85	1.75	1.75	2.25
Salicin, USP	lb	.....	4.86	4.86	4.86	4.42	3.90
Salol, USP, 100 lb drums	lb.	.....	.90	.90	.90	.90	.53
Saltpetre, powd, bbls wks	lb.	.06½	.08½	.08½	.06½	.06½	.05½
Santonin, USP, bulk	lb.	141.00	145.00	141.00	145.00	141.00	28.70
Saponin, refined	lb.	1.30	1.50	1.50	1.30	1.26½	1.25
Scopolamine, see Hyoscine	lb.						

ALCOHOL THROUGH THE AGES , NUMBER X



CHEMISTRY AND CONTINENTS

While Isabella was financing Columbus for his famous cruise, Maximilian I was lending a willing ear to the cause of medical and chemical science. Thus the fifteenth century stands as an important period in the history of chemistry, as well as continents.

Prior to this time the prevailing medicines were largely herbs, plants, syrups, and powders. Brounschwygk of Strassburg, in his book on Distillation (dated 1500) discusses distilling the water of *ants, frogs, ox blood and flies.* These strange attempts to extract the secrets of life from nature were important in that they demanded more efficient methods of distillation and improved Stills. The Still illustrated above is a development of this period of chemical research and is regarded as one of the links between the medieval and modern Stills.

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The Stills in use in the plants of the Kentucky Alcohol Corporation today are recognized by the entire industry as being the last word in modern equipment. And developments by the "Kentucky companies" represent a present day contribution to medical and chemical practices which places this era in an important position in the history of distillation.

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its position of last month. Now quoted at $3.25 @ $3.50 lb. but with very keen competition continuing.

Potassium Sulfate — Has declined in price during the past month due to accumulation of supplies. Now being quoted at 13c @ 15c lb.

Resorcinol — The market has been weak and competition has brought about further reduction in price. Now quoted at $1.70 @ $1.75 lb.

Witch Hazel — Demand steadily increases with quotations at 80c @ $1.00 gal. following a price reduction about the middle of January.

Essential Oils

While the current month has opened up quietly as regards movement of essentials oils, the poundage of oils moved in January by practically all dealers was considerably above the movement of January a year ago. However, due to the lower prices prevailing this year, the value of the oils moved in January was less than January a year ago. Outstanding changes during the past month were the recovery in Bergamot and Wormseed.

Oil Almond — There has been no change in the basic position throughout the month and the market has continued in a steady position. However supplies of Sweet oil has been in better supply on spot and one factor formerly naming 78c per pound is now quoting 75c. The range is up to 77c per pound.

Oil Anise — Conditions in China have been easy and the spot market has also been in the same position. Prices have been steady, however, with the exception the U. S. P. oil is slightly lower at 57c @ 59c per pound.

Oil Bay — There has been an easier tone to this market due to plentiful supplies in the primary market as well as in the spot market. Generally, however, prices are within the same range as given last month, that is, $1.90 @ $2.00 per pound. One seller who was above this range last month at $2.10 is now quoting $2.00.

Oil Bergamot — A reversal from weak to strong occurred in bergamot. Spot supplies were not as large as anticipated and demand set in fairly heavy during the forepart of the year. The primary market was quick to sense the position here and shipment prices strengthened. However, goods afloat have arrived and the market has reacted downward from its peak of the month although it is still sharply above

		Current Market	1928 High	1928 Low	1927 Aver.	1914 July
Siedlitz Mixture, 250 lb bb	lb.	.....	.....	.....	.17½	.14
Silver						
Silver Metal, American	oz.	.....	.57½	.57½	.57½	.64	.....
Iodide, 16 oz lots	oz.	.....	.69	.69	.69	.69	.83
Nitrate, 10 oz bottles	oz.	.40½	.42½	.42½	.40½	.41	.35
Nucleinate, 1 oz bottles	oz.	.....	.46	.46	.46	.46	1.10
Bulk	oz.	.....	.37	.37	.37	.37	1.00
Proteinate, 1 oz bottles	oz.	.....	.41	.41	.41	.41	.70
Bulk	oz.	.....	.32	.32	.32	.32	.65
Soap, Castile, 50 lb boxes	lb.	.....	.25	.25	.25	.25	.11½
USP, pwd., 250 lb bbls	lb.	.28	.30	.30	.28	.28	.....
USP, green, 450 lb bbls	lb.	.07½	.07½	.07½	.07½	.07½	.08
Sodium Salts						
Sodium Benzoate, USP, 100 lb bbls	lb.	.50	.55	.55	.50	.50	.23½
Bromide, USP, 100 lb kegs	lb.	.42	.43	.43	.42	.44	.45
Cacodylate USP, 25 lb bot	lb.	4.80	6.10	6.10	4.80	4.80	3.75
Citrate, USP, X 50 lb kegs	lb.	.45	.47	.47	.45	.45	.48½
USP VIII, 50 lb kegs	lb.	.38	.40	.40	.38	.38	1918
Glycerophosphate, USP, crys 25 lb cans	lb.	1.40	1.55	1.55	1.40	1.40	1.90
Powder, 25 lb tins	lb.	1.45	1.60	1.60	1.45	1.45	.....
Soln, USP, 25 lb tins	lb.	1.05	1.20	1.20	1.05	1.05	1.10
Hypophosphite, USP, 25 lb cans	lb.	.70	.75	.75	.70	.70	.59
Iodide, USP, 25 lb jars	lb.	4.25	4.30	4.30	4.25	4.25	3.30
Phosphate (Mono-Sodium), 100 lb kegs	lb.	.30	.31	.31	.30	.30	.45
Di-Sodium USP, granular, 275 lb bbls	lb.	.07½	.08	.08	.07½	.07½	.04½
Pyrophosphate, 100 lb kegs	lb.	.....	.29	.29	.29	.26	.27
Salicylate, 100 lb kegs	lb.	.....	.47	.47	.47	.47	.27
Silicate, 41° drums	lb.	.....	.01½	.01½	.01½	.01½	.01
47° drums	drm.	.....	12.00	12.00	12.00	12.00	.....
Sulfocarbolate, USP, 100 lb kegs	lb.	.....	.31	.31	.31	.31½	.19
Sulfocyanate, CP crys, jars included	lb.	...	.60	.60	.60	.60	1.25
Spartein Sulfate, USP, 25 oz bulk	oz.	.65	.70	.70	.60	.65	.33
Single oz vial	oz.	.77	.90	.90	.77	.77	.35
Starch Rice, 140 lb bags	lb.	.09	.10	.10	.09	.09	.07
Strontium Salts						
Strontium Bromide, USP, 50 lb kegs	lb.	.51	.52	.52	.51	.51	.45
Carb, 100 lb kegs wks	l.b	.....	.20	.20	.20	.22	1918
Iodide, USP, 25 lb jars	lb.	.....	4.00	4.00	4.00	4.00	3.00
Lactate, kegs	lb.	.90	1.10	1.10	.90	1.07	.90
Nitrate, 600 lb bbls NY	lb.	.08	.08½	.08½	.08	.08	.07½
Imp. bbls NY	lb.	.08	.08½	.08½	.08	.08	.07½
Salicylate, USP 100 lb keg	lb.	.....	1.10	1.10	1.10	.91	.38
Strophanthin, USP, 1 oz vial	oz.	.....	19.00	19.00	19.00	19.00	9.00
Crystals	lb.	.....	75.00	75.00	75.00	75.00	16.50
Strychnine						
Strychnine Alk, USP crys, 100 oz tins	oz	.56	.66	.66	.56	.56	.46
Powdered	oz.	.46	.56	.56	.46	.40½	1917
Japanese cans	oz.	.....	Nom.	.75	.75	.75	.....
Acetate	oz.	.....	.55	.55	.55	.55	.80
Arsenate, 25 oz cans	oz.	.....	.55	.55	.55	.55	.75
Glycerophosphite, USP	oz.	.....	.55	.55	.55	.55	1.45
Hydrobromide	oz.	.....	.55	.55	.55	.55	.80
Hydrochloride	oz.	.....	.55	.55	.55	.55	.80
Hypophosphite	oz	.....	.65	.65	.65	.65	1.05
Nitrate, USP	oz.	.52	.62	.62	.52	.52	1918
Phosphate	oz.	.....	.55	.55	.55	.55	1918
Saccharine	oz.	.....	1.15	1.15	1.15	1.15	.....
Sulfate, USP crys, powd	oz.	.....	.38	.38	.38	.38	.46
Sugar						
Sugar, refined, 275 lb bbl	100 lb.	5.80	5.90	5.90	5.80	.....	.....
Milk, USP, 200 lb bbls	lb.	.18	.20	.20	.18	.18	.12
Sulfonal, see Sulfonmethane							
Sulfonethylmethane, USP, 10 lb boxes	lb.	3.85	4.05	4.05	3.85	3.85	3.50
Sulonmethane, USP, 10 lb box	lb.	2.65	3.85	3.85	2.65	2.65	2.20
Sulfur flwrs, 100%, 25 lb box	lb	.....	.10	.10	.10	.10	.....
Washed, USP, 125 lb bbl	lb.	.....	.06	.06	.06	.06	.04½
Iodide, USP, VIII, 5 lb bot	lb.	.....	4.55	4.55	4.55	4.55	3.60
Tapioca Flour, hgh grd bgs	lb.	.05	.05½	.05½	.05	.05	.01
Tartar Emetic, USP, 300 lb bbls	lb.	.34½	.36	.36	.34½	.34½	.22½
Terebene, tins	lb.	.....	.85	.85	.85	.85	.50½
Terpin Hydrate, USP, 100 lb kegs	lb.	.45	.47	.47	.45	.45	.24
Terpineol, CP, 1000 lb drs	lb.	.33	.35	.35	.33	.36	Nom.
50 lb cans	lb.	.37	.38	.38	.37	.40	Nom.
Imported, 25 lb cans	lb.	.34	.37	.37	.34	.40	....
Terpinyl Acetate, 25 lb can	lb.	1.65	1.85	1.85	1.65	1.65	.....
Theobromine						
Theobromine Alk, 5 lb cans	lb.	1.90	2.25	2.25	1.90	1.95	4.32
Sod. Salicylate, 1 lb bot	lb.	.....	2.10	2.10	2.10	2.40	2.64
Sod. Benzoate, 1 oz vials	oz.	.....	1.00	1.00	1.00	1.00	.....
Thymol, USP, 25 lb tins	lb	.....	2.75	2.75	2.75	2.92	2.20
Iodide kegs	lb.	6.50	7.00	7.00	6.50	6.44	5.70
Tin	lb.	.....	.53½	.53½	.53½	.....	.....
Veratrine Alkaloid	oz	.....	2.25	2.25	2.25	2.25	1.45
Sulfate, 1 oz vials	oz.	.....	2.25	2.25	2.25	2.25	1.55
Witch Hazel Ext., 50 gal bbl	gal.	.80	1.00	1.00	.80	1.05	1918
Yohimbin Hydrochloride, 1 oz vials	oz.	2.75	3.25	3.25	2.75	3.25	.....
Resale	oz.	2.65	2.70	2.70	2.65	2.65	.....
Zinc Carb, USP, 100 lb keg	lb.	.28	.31	.31	.28	.28	.13½
Chloride, USP, 25 jars ex	lb	.24	.29	.29	.24	.24	.17
Iodide, 5 lb bottles	lb.	.....	5.22	5.22	5.22	5.22	3.45
Oxide, USP, 100 lb bbls	lb.	.17	.18	.18	.17	.14½	.14½
Stearate, USP, 50 lb bbl	lb.	.....	.22	.22	.22	.21½	.30
Sulfate, USP, 100 lb bbl	lb.	.08	.09	.09	.08	.08	.06½
Sulfocarbolate, 100 lb kegs	lb.	.....	.29	.29	.29	.29½	.19

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Standard Purchasing Power of the Dollar: July 1914 $1.00 - Jan. 1927 68.7c - July 1927 71.7c - Jan. 1928 65.6c

the price of a month ago. The general range of prices stands at $5.35 @ $5.85 per pound, although one spot holder is offering as low as $5.10. Factors do not believe that there is any statistical reason for the advance as the last advices place the crop at 700,000 Sicilian pounds, against 400,000 pounds for the year before.

Oil Bois de Rose — Conditions continue unchanged, competition between the Cayanne and Brazilian producers holding prices at $2.05 @ $2.25 per pound for Cayanne, and $1.80 @ $2.00 per pound for Brazilian.

Oil Camphor — Supplies of all grades are plentiful on spot and prices have been easy throughout the month. White oil in cans has been shaded slightly to 14c @ 14½c lb.

Oil Cananga — Prices have not shown the slightest variation throughout the month although demand has been good. Competition among the Java producers continues sharp and it is doubtful if any real advance will occur unless these producers again agree to act as a unit on prices quoted for shipment.

Oil Cardamon — Some strength has been given to this oil due to advances in the prices of the seed. However, oil is still available over a wide range of prices as to seller.

Oil Cassia — Considerable strength has developed in the spot market for the technical oil due to the fact quite large quantities of oil diluted with alcohol have been held up by the Government with the resultant that spot stocks are below normal. This material will carry a duty if brought in as is, or probably permission will be given to remove and destroy the alcohol in which case the oil will be admitted free of duty. Spot offerings of technical oil are now held at $1.40 @ $1.45 per pound. This strength in the technical oil has also driven up the U. S. P. grade which is now held at a minimum of $1.80 per pound on spot.

Oil Cedar Wood — Offerings have been plentiful throughout the month and the position has remained easy. Prices are still named at 24c @ 26c per pound.

Oil Citronella — The market has continued in a steady position throughout the month and may be regarded as somewhat firmer. Demand has been of good proportions. Ceylon oil is now held in drums at 34c @ 36c per pound, with Java oil at 41c per pound in drums.

Oil Cloves — Strength in the prices of the spice has been reflected in the oil and quotations are higher at $1.35 @ $1.40 per pound although it may still be pos-

		Current Market	1928 High	1928 Low	1927 Aver.	1914 July
Natural Derivatives						
Anethol, 2 lb bot	lb.	.....	1.30	1.30	1.30	.....
Borneol, 1 lb bot	lb.	2.50	2.60	2.60	2.50	1.50
Carvol, 5 lb bot	lb.	.....	3.85	3.85	3.85	6.00	.....
Citral, 25 lb cans	lb.	.....	2.75	2.75	2.75	2.75	3.50
Citronellal, 1 lb bot	lb	3.00	3.25	3.25	3.00	3.00	2.50
Eucalyptol, USP, 50 lb cans	lb.	1.00	1.05	1.05	1.00	.90	.55
Eugenol, USP, 25 lb cans	lb.	2.75	2.90	2.90	2.75	2.75	2.00
Geraniol, domestic, 50 lb cases	lb.	2.50	2.70	2.70	2.50	2.65	4.25
Imported, 5 lb bot	lb.	2.90	3.10	3.10	2.90	3.03	4.25
Iso-Eugenol, 1 lb bot	lb.	4.25	4.50	4.50	4.25	4.25	3.25
Imported, 1 lb bot	lb.	3.70	3.80	3.80	3.70	3.82	3.25
Linalol from Bois de Rose, 5 lb bot	lb.	3.00	3.15	3.15	3.00	3.34	5.25
Menthol, 60 lb cases	lb.	4.25	4.50	4.50	4.25	4.05	3.60
less cases, 5 lb cans	lb.	....	4.85	4.85	4.85	4.95	4.50
Rhodinol, 1 lb bot	lb.	6.00	6.25	6.25	6.00	9.50	....
Saffrol, drums	lb.	.....	.27	.27	.27	.28½	.30
60 lb cans	lb.	.....	.29	.29	.29	.30½	.31
Thymol, USP, 25 lb tins	lb.	.....	2.75	2.75	2.75	3.50	2.05
Synthetic Aromatics						
Acetophenene, CP, 1 lb bot	lb	3.50	3.75	3.75	3.50	3.50	.....
Aldehyde, C 8 (Otcyl), 1 lb bot	lb.	.....	55.00	55.00	55.00	.....	.....
C 7, 1 lb bot	lb.	4.50	5.50	5.50	4.50	4.50	.....
C 9 (Nomyl), 1 lb bot	lb.	.....	140.00	140.00	140.00	87.50	.....
C 10 (Decyl), 1 lb bot	lb.	.....	48.00	48.00	48.00	49.50	.....
C 14, 1 lb bot	lb.	22.50	25.00	25.00	22.50	22.50	.....
C 16, 1 lb bot	lb.	70.00	80.00	80.00	70.00	70.00	.....
Aubepine, see Anisic Aldehyde							
Amyl Acetate							
Amyl Acetate, pure, 5 gal cans	gal.	4.75	5.50	5.50	4.75	4.75	5.00
Butyrate, 1 lb bot	lb.	.....	1.90	1.90	1.90	1.96	7.00
Butyrate, 5 lb bot	lb.	.....	1.75	1.75	1.75	1.75	.....
Cinnamate, 5 lb bot	lb.	9.50	9.75	9.75	9.50	5.00	.....
Formate, 1 lb bot	lb.	.....	1.90	1.90	1.90	2.00	.....
Formate, 5 lb bot	lb.	.....	1.75	1.75	1.75	1.75	.....
Phenyl Acetate, 1 lb bot	lb.	4.50	5.00	5.00	4.50	4.50	.....
Salicylate, 100 lb cbys	lb.	1.25	1.30	1.30	1.25	1.25	1.50
Imported	lb.	2.25	2.50	2.50	2.25	2.25	.....
Anisic Aldehyde, 1 lb bot	lb.	3.00	3.25	3.25	3.00	3.00	2.50
Benzaldehyde, USP, 40 lb cbys,	lb.	.....	.....	.....	.....	1.25	1918
50 lb cbys	lb.	1.25	1.35	1.35	1.25	1.25	1918
FFC, 40 lb cbys	lb.	1.35	1.45	1.45	1.35	1.86	1918
Benzoic Ether, see Ethyl Benzoate							
Benzophenone, 1 lb bot	lb.	4.50	5.00	5.00	4.50	4.50	.....
Benzyl Acetate							
Benzyl Acetate, 100 lb cbys	lb.	.90	1.10	1.10	.90	.97	.70
Alcohol, 5 lb bot	lb.	1.25	1.35	1.35	1.25	1.25	1.25
Benzoate, 5 lb bot	lb.	1.25	1.35	1.35	1.25	1.25	.75
Benzyl Benzoate		1.35	1.40	1.40	1.35	1.45	.....
Medicinal, FFC	lb.	.....	1.40	1.40	1.40	4.00	.....
Buytrate, CP, 1 lb bot	lb.	9.25	9.50	9.50	9.25	9.50	.....
Cinnamate, 1 lb bot	lb.	3.00	3.25	3.25	3.00	3.00	.....
Formate, 1 lb bot	lb.	3.15	3.25	3.75	3.15	3.95	.....
Propionate, 1 lb bot	lb.	3.60	3.75	3.75	3.60	5.50	.....
Succinate, 1 lb bot	lb.	5.25	5.50	5.50	5.25	7.50	.....
Valerate, 5 lb bot	lb.	3.00	3.25	3.25	3.00	3.25	1.75
Bornyl Acetate, 1 lb bot	lb.	3.15	3.25	3.25	3.15	5.00	.....
Bromstyrol, 25 lb cases	lb.	.....	5.00	5.00	5.00	16.00	.....
Butyl Anthranilate dom, 1 lb bot	lb.					16.00	.....
Butyric Ether, see Ethyl Butyrate							
Cinnamic Acid							
Cinnamic Acid, 5 lb cans	lb.	3.25	3.50	3.50	3.25	3.25	.....
Alcohol liquid, 1 lb bot	lb.	3.25	3.50	3.50	3.25	3.55	5.00
Crystallizable	lb.	7.00	8.00	8.00	7.00	7.00	8.00
Aldehyde	lb.	2.25	2.50	2.50	2.25	2.71	1.60
Imported, 1 lb bot	lb.	7.75	9.00	9.00	7.75	7.75	.....
Citronelyl Acetate, 1 lb bot	lb.	7.75	8.00	8.00	7.75	11.25	.....
Coumarin, 25 lb cans	lb.	3.50	4.00	4.00	3.50	3.60	3.25
Decyl Alcohol	lb.	25.00	28.00	28.00	25.00	28.00	.....
Diethyl Phthlate see Chemicals							
Diphenyloxide, 25 lb tins	lb.	1.00	1.15	1.15	1.00	1.15	.....
Diphenyl Methane	lb	1.50	1.75	1.75	1.50	1	:
Duodecyl Alcohol	lb.	20.00	22.00	22.00	20.00	22.00	.....
Ethyl Acetate							
Ethyl Acetate, pure, 5 lb bot	lb.	.45	.50	.50	.45	.45	3.75
Benzoate, 5 lb bot	lb	1.50	1.75	1.75	1.50	1.75	3.00
Ethyl Butyrate, 5 lb bot	lb.	1.80	2.00	2.00	1.80	2.00	10.50
Caproate, 1 lb bot	lb.	3.25	3.50	3.50	3.25	3.25	.....
Cinnamate, 1 lb bot	lb.	4.00	4.50	4.50	4.00	4.00	.....
Formate, 5 lb bot	lb.	1.00	1.25	1.25	1.00	1.00	12.00
Methyl Paracresol, 1 lb bot	lb.	3.25	3.50	3.50	3.25	3.25	.....
Phenyl Acetate, 5 lb bot	lb.	3.75	4.00	4.00	3.75	3.75	.....
Valerate, 5 lb bot	lb.	.....	3.75	3.75	3.75	3.75	.....
Salicylate, 5 lb bot	lb.	2.00	2.10	2.10	2.00	2.00	3.50
Formic Ether see Ethyl Formate							

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sible to shade these quotations slightly from sellers who have goods bought at low prices. The course of the market for the spice depends on the needs of the European and Eastern markets.

Oil Coriander — Prices have advanced still higher in some directions, but it is still possible to do $10.50 per pound, with quotations ranging up to $13.00. The world shortage in the seed is becoming increasingly acute and prices for the seed have advanced from 9c per pound to 11c against a normal price of 4½c, and a price last year of 3c. No new crop will be forthcoming until next Fall and there will be no uncommitted seed in sight until then. Coriander appears very strong for these reasons.

Oil Eucalyptus — The market continues to appear strong as a result of the increased demand for the Australian oil from Europe. Prices are unchanged, however, and supplies are plentiful.

Oil Geranium — Conditions are following the trend outlined in last month's report and the market is in a much stronger position. The rumor that a large consuming seller has severed his connections with the primary is reconfirmed, and with this low priced seller eliminated, other sellers expect to see higher prices within a few months. There is a real short crop of Bourbon oil and the market is statistically strong.

Oil Lavender — Prices are higher from most sellers with oil on spot held $3.40 @ $3.85 per pound as to quality and quantity. However, there is a decided lack of demand and the market is none too strong at these prices. Spike lavender oil is holding at 95c @ $1.05 per pound, although oil is plentiful in the primary market and exchange has worked toward lower values here.

Oil Lemon — A real shortage of spot oil during the first week of this month forced prices for spot oil up quite sharply. However, recent arrivals on the Laura C. have more than made up for the heavy demand and the market has reacted downward. At present oil is held at $2.45 @ $2.75 per pound as to seller and quality. California oil is in good demand at $2.55 @ $2.60 per pound. Growing conditions in this country have been so favorable that there is very little fruit unfit for the fruit market. This means that very little oil can be produced.

Oil Limes — Conditions prevail unchanged. Prices are still on the easy side although there will shortly be an active demand from extract manufacturers and increased strength is forecast. Sellers are

		Current Market	1928 High	1928 Low	1927 Aver.	1914 July
Geranyl Acetate						
Geranyl Acetate, 1 lb bot	lb.	3.20	3.25	3.25	3.20	4.04	6.00
Butyrate, 1 lb bot	lb.	13.00	13.50	13.50	13.00	13.00	.....
Formate, 1 lb bot	lb.	12.00	12.50	12.50	12.00	12.00	.....
Glyco Ester	lb.	.90	1.00	1.00	.90	1.00	.....
Heliotropin, 100-10 lbs	lb.	1.65	1.75	1.75	1.65	1.65	1.30
Imported	lb.	1.95	2.05	2.05	1.95	2.00	1.30
Hydroxycitronellal, 1 lb	lb.	5.50	7.50	7.50	5.50	7.30	.....
Indol, CP, 1 oz bot	lb.	4.25	4.50	4.50	4.25	3.75	.....
Ionone						
Ionone, 1 lb bot 100%	lb.	6.00	7.00	7.00	6.00	6.75	.....
Alpha	lb.	4.75	6.25	6.25	4.75	7.50	.....
Beta	lb.	5.50	7.25	7.25	5.50	8.00	.....
Methyl	lb.	5.75	7.25	7.25	5.75	7.25	.....
Iso Borneol	lb.	2.15	2.25	2.25	2.15	2.25	.....
Iso Bornyl Acetate	lb.	2.80	3.00	3.00	2.80	3.00	.....
Iso-Butyl Benzoate 5 lb bot	lb.	2.75	3.00	3.00	2.75	2.75	.....
Iso-Safrol, 1 lb bot imp	lb.	1.65	1.75	1.75	1.65	1.94	.....
Domestic 5 lb bot	lb.	3.50	3.75	3.75	2.50	3.50	.....
Lynalyl Acetate, 1 lb bot	lb.	3.25	4.50	4.50	3.25	7.75	.....
Benzoate, 1 lb bot	lb.	13.00	14.00	14.00	13.00	13.00	.....
Formate, 5 lb bot	lb.	10.50	12.00	12.00	10.50	15.00	.....
Methyl Acetophenone						
Methyl Acetophenone	lb.	3.65	3.75	3.75	3.65	3.70	.....
Anthranilate, 1 lb bot	lb.	2.40	2.45	2.45	2.40	2.51	4.50
Imported	lb.	2.70	2.75	2.75	2.70	2.76	4.50
Anthranilic Acid	lb.	11.75	12.00	12.00	11.75	12.00	.....
Benzoate, 5 lb bot imp	lb.	1.90	2.00	2.00	1.90	2.00	.....
Domestic, 5 lb bot	lb.	1.75	2.00	2.00	1.75	1.75	.....
Cinnamate, 1 lb bot	lb.	3.75	4.25	4.25	3.75	3.75	3.50
Heptenone, 1 lb bot	lb.	8.50	9.00	9.00	8.50	8.50	.....
Paracresol, 1 lb bot	lb.	4.50	8.00	8.00	4.50	5.67	.....
Phenylacetate, 5 lb bot	lb.	3.75	4.00	4.00	3.75	3.75	.....
Salicylate, USP, 500 lb dr	lb.	.....	.40	.40	.40	.43	.45
50 lb cases	lb.	.....	.42	.42	.42	.45	.47
Mirbane, rect, 1,000 lb drs	lb.	.12	.13	.13	.12	.13	.06½
Musk Ambrette						
Musk Ambrette 1 lb cans	lb.	6.50	6.75	6.75	6.50	6.80	12.00
Ketone 1 lb cans	lb.	8.00	8.15	8.15	8.00	8.18	.....
Xylene 5 lb cans	lb.	2.25	2.35	2.35	2.25	2.39	.....
Nerolin 1 lb cans	lb.	1.40	1.50	1.50	1.40	1.48	2.00
Octyl Alcohol 1 lb bot	lb.	30.00	32.00	32.00	30.00	32.00	.....
Oenanthic Ether 1 lb bot	lb.	1.90	2.00	2.00	1.90	2.25	.....
Paracresol Methyl Ether	lb.	6.50	6.75	6.75	6.50	7.31	.....
Paracresyl Acetate	lb.	5.50	5.75	5.75	5.50	5.50	.....
Para Cymene Refd 110 gal dr	gal.	2.25	2.50	2.50	2.25	2.25	.....
Phenylacetaldehyde						
Phenylacetaldehyde 50% 1 lb bot	lb.	7.00	7.50	7.50	7.00	8.00	6.50
Imported 50%	lb.	6.25	6.50	6.50	6.25	7.00	6.50
100%	lb.	8.00	8.25	8.25	8.00	8.67	.....
Phenylacetic Acid 1 lb bot	lb.	3.00	3.25	3.25	3.00	3.00	.....
Phenyl Diacetate 1 oz bot	oz.	3.00	3.25	3.25	3.00	3.25	.....
1 lb bot	lb.	8.00	10.00	10.00	8.00	8.00	.....
Imported	lb.	7.00	7.75	7.75	7.00	7.00	.....
Phenylethyl Alcohol 1 lb bot	lb.	4.50	4.75	4.75	4.50	5.20	16.00
Phenyl Ethyl Acetate	lb.	8.25	8.75	8.75	8.25	10.00	.....
Butyrate 1 lb bot	lb.	15.00	16.00	16.00	15.00	16.00	.....
Formate, 1 lb bot	lb.	19.00	21.00	21.00	19.00	19.00	.....
Propionate, 1 lb bot	lb.	16.00	18.00	18.00	16.00	18.00	.....
Valerate, 1 lb bot	lb.	19.00	20.00	20.00	19.00	20.00	.....
Phenylpropylalcohol, 1 lb bot	lb.	15.00	16.00	16.00	15.00	15.00	.....
Skatol, 1 oz bot	lb.	4.50	7.00	7.00	4.50	4.50	.....
Terpinyl Acetate, 25 lb cans	lb.	.75	.80	.80	.75	1.05	1.25
Imported, 25 lb cans	lb.	.85	.90	.90	.85	1.25	1.25
Terpineol						
Terpineol, CP, 1000 lb drs	lb.	.33	.35	.35	.33	.35	.40
50 lb cans	lb.	.37	.39	.39	.37	.38	.45
Absolute, 25 lb cans	lb.	.48	.50	.50	.48	.49	.....
Imported, 25 lb cans	lb.	.58	.60	.60	.58	.39	.....
Vanillin, USP, 25 lb tins	lb.	.....	7.50	7.50	7.50	7.75	5.12
1 lb cans	lb.	.....	7.70	7.70	7.70	8.07½	5.50
Second Hands	lb.	.....	6.75	6.75	6.75	.45	.....
Valerianic Ether see Ethyl Valerate							
Yara Yara, 1 lb cans	lb.	1.50	1.60	1.60	1.50	1.50	.....
Essential Oils							
Almond Bitter, USP, 5 lb bot	lb.	2.70	2.80	2.80	2.70	2.72½	3.50
Bitter, ffPA, 5 lb bot	lb.	3.00	3.25	3.25	3.00	3.00	3.35
Sweet, 56 lb cans	lb	.75	.77	.78	.75	.80	.80
Amber crude, 25 lb tins	lb.	.33	.35	.35	.33	.39	.12
Rectified, 25 lb tins	lb.	.52	.55	.55	.52	.55	.32
Angelica Root, 1 lb bot	lb.	16.00	18.00	18.00	16.00	19.50	26.00
Anise Tech, 66 lb cases	lb.	.54	.56	.56	.54	.57	1.60
USP, 60 lb cans	lb.	.57	.59	.60	.57	.59	1.70
Apricot Kernel, 50 lb cans	lb.	.48	.50	.50	.48	.58	.30
Bay, 25 lb tins N. F. V., 50.55% Phenol	lb.	1.90	2.00	2.00	1.90	1.95	2.40
Terpeneless	lb.	5.80	6.00	6.00	5.80	6.00	6.50
Bergamot							
Bergamot, 25 lb coppers	lb.	5.10	5.85	5.85	4.85	5.91	5.10
Terpeneless	lb.	14.00	18.00	18.00	14.00	11.00	7.50
Artificial, 25 lb cans	lb.	2.50	3.25	3.25	2.50	2.50	3.10

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Essential Oils

Standard Purchasing Power of the Dollar: July 1914 $1.00 - Jan. 1927 68.7c - July 1927 71.7c - Jan. 1928 65.6c

of the opinion that present prices represent the bottom of the movement.

Oil Linaloe — Mexican linaloe staged an unexpected recovery during the month advancing 30c per pound to a basis of $2.15 @ $2.20 per pound. As this oil is quite similar to bois de rose, it followed bois de rose downward in its price movement. However, there are distinctly different properties possessed by linaloe that have caused consumers to demand it with a consequent lessening of spot supplies.

Oil Mace — A stronger position is noted due to strength in the seed market, and oil is now held at a minimum of $1.70 per pound. The seed is sharply higher in Holland and the Orient, but as yet prices here have not advanced to foreign levels, and, therefore, further advances would not be surprising.

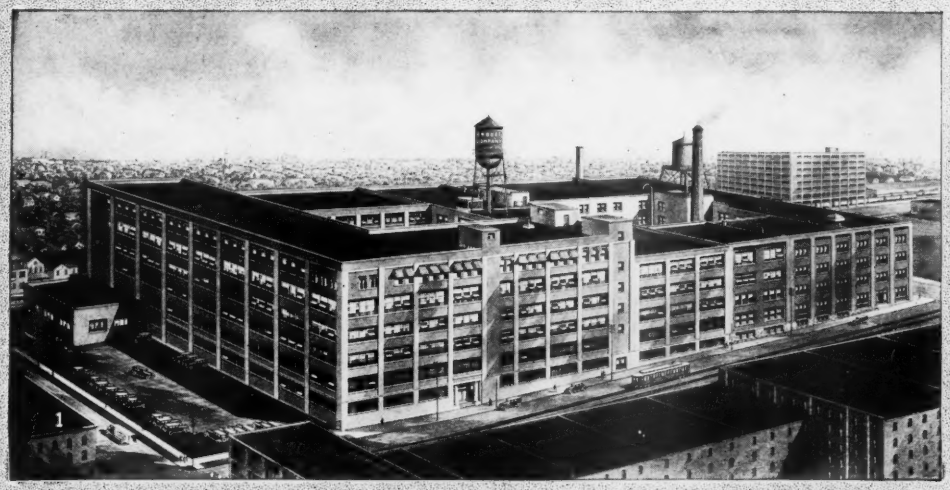
Oil Mandarin — While spot prices remain unchanged, the position is understood to be statistically weak due to large crops in Messina, Italy, following the producing season. General demand has been poor, and real firmness hardly ever appears. Goods are quite reasonable for shipment.

Oil Nutmeg — Higher prices for nutmegs, together with real strength in mace, has caused this market to move slightly upwards. Due to the fact that mace points higher, increased strength should develop in this oil.

Oil Orange — An upward movement occurred during the month following the increasing strength of the situation as reported last month. The shortage of the American cold pressed oil has become increasingly acute and quotations are nominal at $3.50 per pound. The fact that the growing season has been particularly favorable to good fruit suitable to be marketed as fruit, has left very little fruit available for production of oil. Italian oil is now held at $3.15 @ $3.60 per pound, with reports that a large part of the crop has been absorbed. Even bitter oil has advanced and is held at $2.90 @ $3.00 per pound. Spanish oil is moving at $3.00 @ $3.15 per pound.

Oil Peppermint — Minor fluctuations have occurred during the month but the position has not varied definitely and the price to-day is only 5c per pound higher than it was a month ago. Spot supplies of natural oil are quoted at $3.25 @ $3.40 per pound as to seller and quantity. The growers are holding their stocks firmly with only an occasional break of about 10c per pound. Large stocks are in growers

		Current Market		1928 High	1928 Low	1927 Aver.	1914 July
Birch, Sweet, Northern, 25 lb. tins	lb.	8.00	10.00	10.00	8.00	8.00	4.25
Southern, 25 lb. tins	lb.	4.00	4.25	4.25	4.25	3.75	.....
Birch Tar, rect, 5 lb bot	lb.	.50	.55	.55	.50	.56	.55
Crude, 50 lb tins	lb.	.12	.14	.1[illegible]	.12	.12	.10
Bois de Rose, tins	..						
Brazillian	lb.	1.80	2.00	2.0[illegible]	1.80	.....	.....
Cayenne, tins	lb.	2.05	2.25	2.25	2.05	2.23	4.00
Cade, 25 lb cans	lb.	.25	.27	.27	.25	.26½	.16
Cajuput, native, 50 lb tins	lb.	.70	.75	.75	.70	.75	.57½
Calamus, 5 lb bot	lb.	3.40	3.50	3.50	3.40	3.77	2.50
Camphor Sassa, 1000 lb drs	lb.	.14½	.15½	.15½	.14½	.15	.15
White, 400 lb drs	lb.	.12	.12½	.12½	.12	.12	.12
Cans, 50 lbs	lb.	.14	.14½	.15	.14	.13	.13
Cananga							
Cananga, Native, 25 lb tins	lb.	3.00	3.50	3.50	3.00	4.75	2.80
Rectified, 25 lb tins	lb.	3.50	4.00	4.00	3.50	5.50	4.40
Caraway, USP	lb.	1.65	1.75	1.75	1.65	1.71	1.90
Cardamon, N F, 1 lb bot	lb.	25.00	38.00	38.00	25.00	26.59	28.00
Cascarilla, USP, 1 lb bot	lb.	50.00	64.00	64.00	50.00	50.00	18.00
Cassia, 80-85%, 400 lb drs	lb.	1.40	1.45	1.45	1.30	1.67	1.10
Redist, USP, 50 lb cans	lb.	1.75	1.85	1.85	1.70	1.96	1.30
Cedar Leaf, 50 lb tins	lb.	.90	1.05	1.05	.90	1.05	.60
Cedar Wood, light, 1000 lb drs	lb.	.24	.26	26	.24	.32	.14
Celery, 1 lb bot	lb.	7.25	7.50	7.50	7.25	8.67	10.50
Chaulmoogra, 80 lb cases	lb.	.....	1.20	1.20	1.20	1.03½	.....
Cinnamon Ceylon, 1 lb bot	lb.	9.75	13.00	13.00	9.75	10.17	6.50
Leaf, 5 lb bot	lb.	1.60	1.75	1.75	1.60	1.60	.....
Citronella							
Citronella Ceylon 1000 lb drs	lb.	.34	.36	.36	.33	.34	.48
50 lb tins	lb.	.36	.38	.38	.35	.38	.49
Java, 400 lb drs	lb.	.41	.43	.43	.40	.45	1.30
50 lb tins	lb.	.43	.45	.46	.43	.48	1.35
Cloves, USP, 50 lb cans	lb.	1.35	1.40	1.40	1.25	1.45	1.00
6 lb bot	lb.	1.45	1.55	1.55	1.35	1.52	1.05
Copaiba	lb.	.70	.80	.80	.70	.87	1.00
Coriander, USP, 10 lb bots	lb.	10.50	12.00	12.00	10.50	6.39	5.50
Croton, USP, 25 lb tins	lb.	.90	.95	.95	.90	.90	.90
Cubebs, USP, 5 lb bot	lb.	3.35	3.45	3.45	3.35	4.12½	2.90
Cumin, 1 lb bot	lb.	.....	3.75	3.75	3.75	7.00	4.25
Dill, 25 lb cans	lb.	4.00	4.25	4.25	4.00	4.00	4.50
Erigeron, 20 lb tins	lb.	2.40	2.50	2.50	2.40	3.42	1.30
Eucalyptus							
Eucalyptus Austl, USP, 56 lb cans, cases	lb.	.59	.60	.60	.59	.57	.45
500 lb drs	lb.	.58	.59	.59	.58	.54½	.43
Fannel, USP, 25 lb tins	lb.	.80	.85	.85	.80	.80	1.90
Geranium African, 25 lb tins	lb.	3.00	3.25	3.25	3.00	2.93	4.75
Bourbon, 28 lb tins	lb.	3.05	3.25	3.25	3.00	2.92	3.65
Turkish, 28 lb tins	lb.	2.50	2.60	2.60	2.45	2.67	3.50
Ginger, 1 lb bot	lb.	4.80	5.00	5.00	4.80	5.50	4.25
Gingergrass, 28 lb tins	lb.	2.50	2.70	2.70	2.50	2.50	1.75
Hemlock, 25 lb tins	lb.	1.00	1.10	1.10	1.00	1.04½	.50
Juniper Berries, USP, 25 lb tins	lb.	2.40	3.75	3.75	2.40	2.59	.85
Wood, 50 lb tins	lb.	.50	.60	.60	.50	.50	.23
Lavender							
Lavender, USP, 28 lb tins	lb.	3.40	3.85	3.85	3.00	3.75	3.75
Spike Spanish, 50 lb cans	lb.	.95	1.05	1.05	.95	1.10	.90
Lemon Ital, 25 lb cans	lb.	2.40	2.65	2.65	2.30	2.33	2.10
California 35 lb cbys	lb.	2.55	2.60	2.60	1.85	.....	.....
Lemongrass, native, 50 lb cans	lb.	.90	.95	.95	.90	.92	1.05
Limes, expressed, 25 lb tins	lb.	9.25	9.50	9.50	9.25	9.37	3.25
Distilled, 25 lb tins	lb.	6.25	6.50	6.75	6.25	6.79	.75
Linaloe Mex, 70 lb cases	lb	2.15	2.20	2.20	1.90	2.04½	3.75
Mace, distilled, 50 lb tins	lb.	1.65	1.70	1.75	1.60	1.77½	.70
Mandarin, 25 lb cases	lb.	7.50	8.00	8.00	7.50	8.60	10.00
Mirbane, ref Aromatic Chemicals							
Mustard							
Mustard, USP, 1 lb bots	lb.	9.50	10.00	10.00	9.50	10.00	3.50
Artif, USP, 5 lb bot	lb.	1.90	2.00	2.00	1.90	1.98	1.25
Neroli Bigarade, ¼ & ½ & 1 lb bot	lb	75.00	140.00	140.00	75.00	75.00	40.00
Petale, 1 lb bot	lb.	160.00	170.00	170.00	160.00	119.17	51.00
Artificial, 1 lb bot	lb.	5.00	15.00	15.00	5.00	7.50	.....
Nutmeg, USP, 50 lb tins	lb	1.65	1.70	1.70	1.60	1.70	.70
Orange							
Orange bitter, 25 lb tins	lb.	2.90	3.00	3.00	2.70	2.72½	4.35
Sweet W Ind., 25 lb tins	lb.	2.75	2.85	2.85	2.60	2.61	2.05
Italian, 25 lb cop	lb.	3.15	3.60	3.25	2.80	2.72	2.15
American, cold pressed 25 lb tins	lb.	3.50	Nom.	3.50	3.50	3.03	.....
Distilled, 25 lb tins	lb.	2.40	2.45	2.45	2.20	2.15	.....
Spanish, 25 lb tins	lb.	3.00	3.15	3.20	3.00	2.94	.....
Oil Orris, concrete	lb.	2.50	3.25	3.25	2.50	3.25	.....
Origanum 50 lb cans tech	lb.	.28	.30	.30	.28	.28	.17
Parsley, 1 lb bot	lb.	6.50	6.75	6.75	6.50	6.50	8.00
Patchouli, 5 lb bot	lb.	8.50	13.00	13.00	8.50	9.04	4.00
Pennyroyal, dom, 25 lb tins	lb.	1.80	1.90	1.90	1.80	1.99	1.75
Imported, 25 lb tins	lb.	1.50	1.55	1.55	1.50	1.73	1.05
Peppermint, nat, 60 lb cases	lb.	3.25	3.40	3.40	3.20	3.44	3.80
Redis, USP, 60 lb cs	lb.	3.55	3.60	3.60	3.45	3.96	4.60
Petit Grain S A., 25 lb tins	lb.	1.60	1.70	1.70	1.60	1.64	3.25
French, 1 lb bot	lb.	6.25	6.50	6.50	6.25	6.50	4.75
Italian, 25 lb tins	lb.	2.20	2.30	2.30	2.20	2.20	3.85
Pimento, 25 lb tins	lb.	2.85	2.95	2.95	2.85	3.67½	1.70
Pineedle Siberian, cans	lb.	.70	.80	.85	.70	.97	.36
Pinus, Sylvestris, 25 lb tins	lb.	1.90	2.00	2.00	1.90	1.69	1.85
Pumilio, USP, 25 lb tins	lb.	2.85	2.95	2.95	2.85	2.78	2.50
Rose Fr, 8, 16, & 32 oz pkgs	lb.	12.00	15.00	15.00	12.00	9.00	12.50
Bulg, 8, 10 & 32 oz pkgs	lb.	10.25	13.00	13.00	10.25	10.25	19.00



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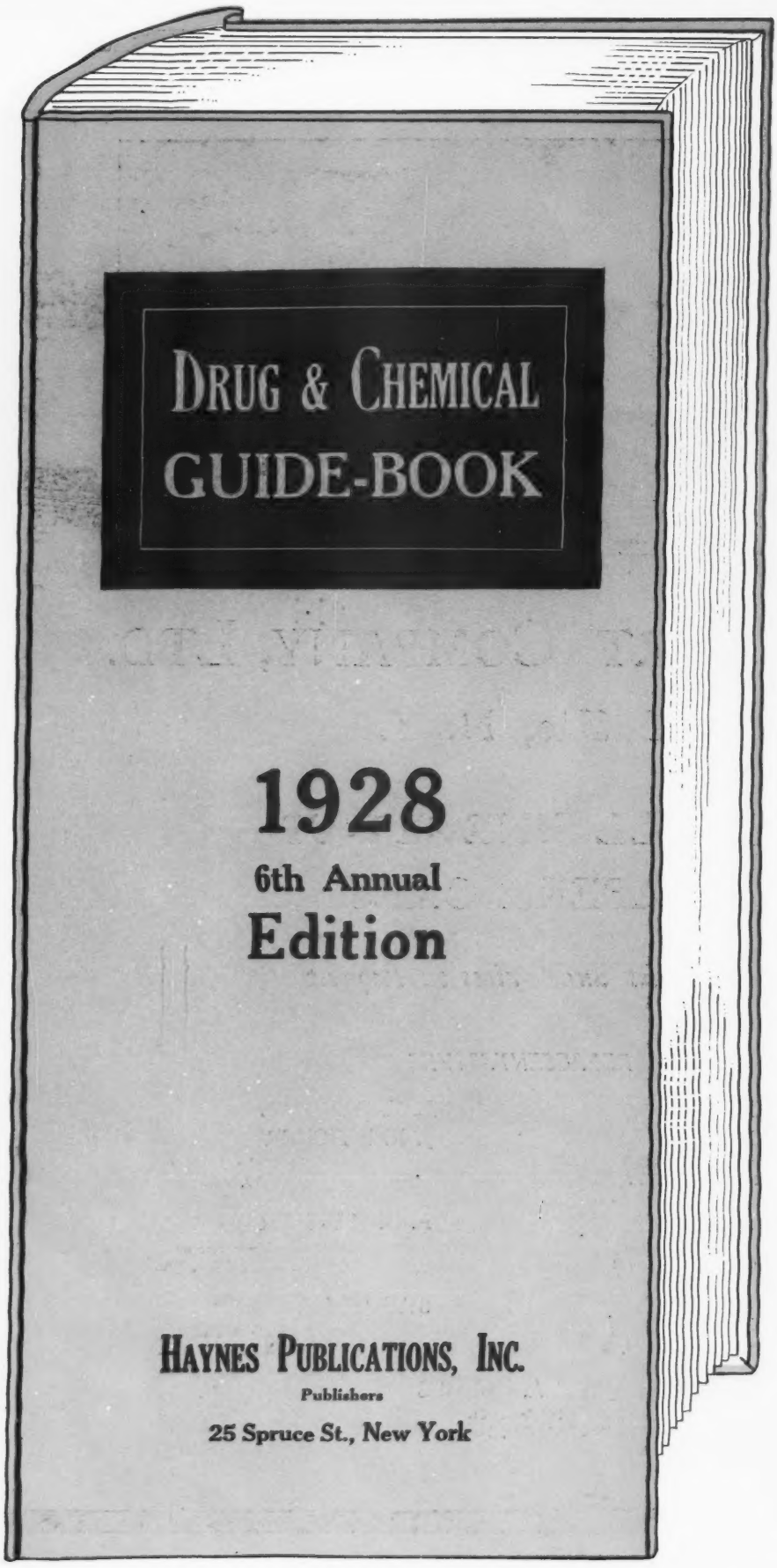

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hands and factors here expect that a weakening will occur shortly after the green shows through as Winter passes. However, it is perfectly possible to hold out longer as the new crop does not come through until late summer or early fall. Certainly there does not appear to be any chance of a sustained advance, and hand to mouth buying appears the best policy, as any attempt on the part of dealers or consumers to cover a large amount of oil might just give the growers the weapon they are looking for.

Oil Pineneedle — Siberian pineneedle oil has receded again. Goods are now freely offered at 70c @ 80c per pound as to quantity. Goods continue to come through more freely from Russia and an easy condition seems likely to continue.

Oil Sassafras — The first change in this oil in a long period has been in the nature of an advance, and holders of spot oil name 80c @ 85c per pound as to seller and quantity. Higher prices for the raw material are responsible for the strength.

Oil Spearmint — This oil has not varied a particle in price throughout the entire month. The position of the oil is quite well balanced as to production and consumption and any advance in price would probably cause accumulation of supplies. At present the outlook is for a continued steady market.

Oil Thyme — There has been no variation in any of the grades. Demand has been good and supplies have been able to meet it.

Oil Wormseed — A surprising recovery in the prices of this oil occurred during the month and further advances are not unlikely. With oil at the low point of $2.85 per pound on spot a month ago, factors in the producing territories agreed to advance shipment prices so that to-day it is impossible to buy in the country below $3.25 per pound. Spot goods are held at $3.25 @ $3.45 per pound with higher prices likely as soon as the lower priced goods have to be replaced. It is the general opinion that there is plenty of oil in the primary market.

Oil Wormwood — Still higher prices are quoted at $13.50 @ $14.00 per pound as the shortage becomes more acute. There does not appear to be any relief in sight as replacement values are still above spot values.

Oil Vertivert — Easiness continues in this oil due to the fact that the roots from which the oil is distilled ran wild in India and the large supply of oil available there has had a weakening tendency on all grades.

		Current Market	1928 High	1928 Low	1927 Aver.	1914 July
Rosemary, USP, 27½ lb tins	lb.	.47½	.52½	.47½	.47½	.65
1000 lb drums	lb.	.42½	.45	.42½	.42½	.62½
Tech, 25½ lb tins	lb.	.....	.34	.34	.37	.57
Rue, 1 lb bot	lb.	3.15	3.25	3.15	3.80	3.85
Sandalwood						
Sandalwood, E Ind, USP, 100 lb case	lb.	7.05	7.15	7.05	7.10	4.75
W Indian (Amayris), 25 lb tins	lb.	2.30	2.35	2.30	2.10	1.15
Sassafras, USP, 50 lb cans	lb.	.80	.85	.75	.98	.55
Artificial, 1000 lb drs, 60 lb cans	lb.	.26	.28	.26	.26	.24
Safrol, cans	lb.	.28	.29	.28	.27½	.30
Savin, 50 lb tins	lb.	1.75	1.90	1.75	1.84	1.80
Spearmint						
Spearmint, USP, 50 lb tins	lb.	4.25	4.40	4.25	3.89	3.40
Spruce, 50 lb tins	lb.	1.00	1.10	1.00	1.07	.45
Tansy, American, 25 lb tins	lb.	4.25	4.50	4.25	4.85	4.25
Tar, 50 gal bbls	lb.	.25	.30	.25	.25	.....
USP, 50 gal bbls	lb.	.75	1.50	.75	.75	.....
Thyme, red, NF, 25 lb tins	lb.	.80	.90	.80	.85	1.15
White, NF, 25 lb tins	lb.	.85	.90	.85	.97	1.25
Tech, 110 lb drums	lb.	.60	.70	.60	.65	.....
Turpentine, USP, rect cbys	lb.	.27	.30	.27	.30	.45
Vetivert Bourbon, 10 bot	lb.	5.85	6.00	5.85	9.90	2.00
Indian, 1 lb bot	lb.	25.00	38.00	25.00	28.33	12.00
Java, 1 lb bot	lb.	15.00	16.00	15.00	18.83	.....
Wine, heavy, 1 lb bot	lb	1.6[illegible]	1.75	1.65	1.75	4.00
Wintergreen						
Gaultheria, true, 25 lb tin	lb.	8.00	10.00	8.00	8.00	4.25
Southern, 25 lb tins	lb.	3.75	4.00	3.75	3.75	.....
Synthetic see Methyl Salicylate						
Wormwood, dom, 25 lb tins	lb.	.....	13.50	14.00	14.00	7.84	3.75
Wormseed, Balt, 25 lb tins	lb	3.25	3.45	3.45	2.85	3.36	1.40
Ylang Ylang Bourbon, 10 lb tins No 1	lb	9.00	9.50	9.50	9.00	12.00	.....
10 lb tins No. 2	lb	6.75	7.00	7.00	6.75	7.00	.....
Manila, 1 lb bot	lb.	30.00	40.00	32.0[illegible]	30.00	32.25	28.00

Oleoresins

Aspidum, USP, bot and tins	lb.	.....	2.10	2.10	2.10	2.11	1.90
Capsicum, USP, bot and tins	lb.	3.50	4.25	4.25	3.50	3.28	2.75
Cubeb, USP, bot and tins	lb	3.00	3.25	3.25	3.00	3.25	2.90
Ginger bot and tins	lb.	2.25	2.7[illegible]	2.75	2.25	2.25	4.25
Malefern see Aspidum							
Orris, bot & tins	lb.	15.00	18.00	18.00	15.00	15.00	.....
Pepper, black, USP, bot & tin	lb.	.....	.....	.....	.....	4.50	.....
Vanilla, bot & tins	lb.	8.00	8.75	8.75	8.00	9.00	.....

Perfumer's Sundries

Almond Meal, 25 lb cans	lb.	.20	.21	.21	.20	.25	.22
Amber liquid, 400 lb drs	lb.	2.20	2.30	2.30	2.20	2.20	.....
Ambergris, Black, boxes	oz.	14.00	15.00	15.00	14.00	17.50	26.00
Gray boxes	oz.	32.00	36.00	36.00	32.00	32.00	28.00
Balsams							
Balsam Copaiba Para, 80 lb cases	lb	.47	.48	.49	.47	.43½	.44
South American, USP, 80 lb cases	lb	.51	.52	.52	.51	.55	.41
Peru, 120 lb cases	lb.	1.65	1.70	1.70	1.65	1.71½	1.50
Tolu, 90 lb cases	lb.	1.00	1.10	1.20	1.00	1.15½	.50
Benzoin Gum, Siam, boxes	lb.	1.20	1.30	1.30	1.20	1.12½	1.50
Castoreum, 1 lb bot	lb.	9.50	10.00	10.00	9.50	12.00	11.00
Chalk, Precip, 1 gt 175 bbls	lb	.04½	.05	.05	.04½	.04½	.....
Cherry Laurel Water, 24 ltr cby	lb	4.10	4.60	5.60	4.10	6.07	6.60
Civet, Abyssin, horns	oz	2.10	3.00	3.00	2.10	2.10	1.50
Labdanum, 5 lb bot	lb.	5.50	6.00	6.00	5.50	7.50	.....
Lanolin, hydrous, 350 lb bbls	lb.	.15	.16	.16	.15	.19	.....
Anhydrous, 350 lb bbls	lb.	.16	.17	.17	.16	.22	.....
Musk Pods Cabardine, tins	lb.	.....	.....	....	.....	.....	8.00
Musk							
Tonquin, tins	oz	24.00	26.00	26.00	24.00	24.00	13.00
Grains Cabardine, tins	oz	.....	.....	.....	.....	.....	12.00
Tonquin tins	oz.	28.00	34.00	34.00	28.00	36.00	16.00
Synthetic See Aromatic Chemical							
Orris Rt Flor powd bbls	lb	.12	.13	.13	.12	.12	.19
Verona powd, bbls	lb	.10	.11	.11	.10	.10	.14
Petrolatum							
Petrolatum, snow white, 350 lb bbls	lb	.12½	.13½	.13½	.12½	.12½	.10
Light Amber, 350 lb bbls	lb	.12½	.13	.13	.12½	.04½	.03
Rice Starch, 140 lb bags	lb.	.09	.10	.10	.09	.09	.....
Rose Water, 24 ltr cbys	cby	5.00	5.50	5.50	5.00	8.55	5.02
Sandalwood, pwd bags,	lb.	.22½	.40	.40	.22½	.61½	.75
Saponin, 5 lb tins	lb.	1.15	1.30	1.30	1.15	1.15	.....
Talc, Italian, 220 lb bags	ton.	60.00	80.00	80.00	60.00	60.00	35.00
French, 220 lb bags	ton	40.00	45.00	45.00	40.00	40.00	15.00

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Crude Drugs

Despite a mediocre amount of interest displayed by the larger consuming interests, the general market is in a sound condition. Prices possess advancing tones and the average prices are substantially higher than those of last month. Spices look a trifle stronger, and while the less popular botanicals have been more or less neglected by the consumers, the widely used drugs, have been moving heavily.

Agar-Agar — Is dull for spot sale and future shipment. Spot offerings of No. 1 threads have been lowered in some sources to 96c @ 97c per pound, representing a decline of 2c per pound from previous prices. The remaining grades have been unaffected. Quotations from Kobe for future shipment have shown some precipitations, but sellers there veil reports of conditions that would indicate the future trend of the market.

Aloes — Continue to maintain a strong position but no permanent advance has taken place since last reported. A few minor fluctuations took place during the month and some sales were made at slight advances above the current prices. The most prominent grade at present is Cape, selling at 9½c @ 10c per pound in the open market, and with some sellers quoting 10c @ 11c per pound firmly.

Althea Root — The demand is unchanged and prices are held more steadily. Cut root seems to be most favorable and moving in good fashion. It is not likely that a radical change will take place for some time.

Angelica Root—The local selling market has been advanced due to increased costs in the interior. While collections have been of normal size, gatherers demand higher prices and the result has caused sellers to name 20c @ 22c per lb. The demand has been somewhat accelarated by the advanced prices. Foreign material is for the most part being consumed abroad and very little is being shipped here, consequently having no effect on prices.

Anise — The anise market is again stronger as evidenced by advanced prices in Spanish. Prices for this variety were advanced in all quarters and the lowest obtainable figure was 14c per pound. Other quotations ranged at fractional intervals as high as 15½c per pound. The advance is partially due to the recent strength witnessed in Spanish currency and partially to the heavy demand during the past few months. Star and Levant seeds have strengthened in sympathy but no visible changes have been made.

	Current Market	1928 High	1928 Low	1927 Aver.	1914 July
Crude Drugs and Spices					
Aconite Leaves, bales lb.	.11	.12	.12	.09	.09	.07
Root, USP, bags lb.	.22	.25	.22	.27	.24	.11
Agar Agar, No. 1, 200 lb bale lb.	.96	.97	1.00	.96	1.07	.45
No. 2, 200 lb bales lb.	.78	.90	.90	.78	.89	.40
No. 3, 200 lb bales lb.	.59	.....	.59	.59	.70	.37
Agaric White, cases lb.	.60	.75	.75	.60	.60	.11
Granulated, boxes lb.	.80	.95	.95	.80	.80	.....
Almonds Bitter, boxes, lb.	.80	.....	.80	.80	.79	.....
Sweet boxes lb	.65	.70	.70	.65	.65	.....
Meal barrels, boxes lb.	.15	.30	.30	.15	.15	.07
Aletris Root, bags lb	.40	.41	.41	.40	.42	.26
Alkanet Root, bags lb	.10	.12	.12	.10	.10	.06
Aloes						
Aloes, Barbados, 120 lb bbl lb.	1.00	1.10	1.10	1.00	1.00	1.15
Powdered lb.	1.10	1.20	1.20	1.10	1.10	.....
Cape, 400 lb cases lb.	.09½	.10	.10	.09½	.10	.08
Curacao, 100 lb cases lb.	.12	.12½	.12½	.12	.11½	.10
Gourds lb.	.35	.45	.45	.35	.35	.09½
Socotrine, Whole, 300 lb cs lb.	.40	.....	.40	.40	.35	.22
Althea Root, bags lb.	.20	.22	.22	.20	.20	.16
Cut cases lb.	.36	.40	.40	.36	.42	.22
Grd & powd, bags lb.	.30	.32	.32	.30	.33	.....
Ammoniac Gum Tears, cases lb.	.50	.....	.50	.50	.20	.17½
Angelica Root, bags lb	.20	.22	.22	.18	.21½	.15
Imported lb	.14½	.....	.14½	.14½	.14½	.18
Angostura Bark, bags lb.	.18	.....	.18	.18	.18	.14½
Anise Levant, bags lb.	.12½	.13	.13	.12½	.12½	1916
Star case lb.	.14	.15	.15	.14	.16¼	.19½
Spanish, bags lb.	.14	.14½	.14½	.13	.15	.10
Arabic Gum						
Arabic Gum, White, No. 1, 100 lb bags lb.	.22	.27½	.27½	.22	.22	.25
Seconds, 200 lb bags lb.	.16	.21	.21	.16	.16	.19
Sorts, Amber, 220 lb bags lb.	.10½	.10½	.10½	.10½	.10½	.10½
Powd, USP, 300 lb bbls lb.	.19	.21	.21	.19	.19	...
Areca Nuts, 100 lb bbls lb.	.12	.12½	.12½	.12	.13	.05
Powd, 100 lb bbls lb.	.17	.21	.21	.17	.17	.....
Arnica Flowers, bales lb.	1.48	1.50	1.50	1.48	....	.12
Root, bags lb.	.....	.45	.45	.37	.37	.40
Arrowroot American powd bbls lb	.10	.10½	.10½	.10	.10	.....
St. Vincent powd bbls lb.	.10	.10½	.10½	.10	.10½	.08
Asafoetida 250 lb cases lb.	.30	.31	.31	.30	.30½	.25
Powd 50 lb boxes lb.	.65	.68	.68	.65	.60	....
Tears Fancy lb.	.60	.70	.70	.60	.61½	.19
Balm Gilead Buds bags lb.	.38	...	.38	.38	.37	.24
Balmony Herbs bales lb	.18	.....	.18	.18	.13	.06½
Barberry Bark bales lb.	.12	.12½	.12½	.12	.10½	1918
Root bags lb.	.29	.32	.32	.29	.24	.06½
Bayberry Bark bales lb.	.....	.18	.18	.12	.09½	.05
Wax bbls lb.	.29	.32	.32	.29	.29	.27
Belladonna						
Belladonna Leaves bales lb.	.20	.22	.23	.20	.20	.50
Root bags lb.	.20	.21	.21	.20	.20	.10
Bees Wax White cases lb.	.55	.56	.58	.55	.58	.47½
Yellow refined cases lb.	.41	.42	.42	.41	.44	.40
Benzoin Gum Siam boxes lb	Nom.	.....	.....	.....	1.25	1.50
Powdered lb.	1.50	.....	1.50	1.50	1.47	.....
Sumatra 80 lb boxes lb.	.65	.68	.68	.65	.59	.34
Berberis Aquafolium Root bags lb.	.13	.....	.13	.13	.11½	.11
Beth Root bags lb.	.18	.....	.18	.18	.18	.08½
Bitter Root 100 lb bags lb.	.19	.20	.20	.19	.21	.24
Blackhaw Bark of Root bales lb.	.30	.....	.30	.30	.27	.17
Bark of Tree bales lb.	.18	.18½	.18¼	.18	.15½	.04½
Black Indian Hemp Root 100 lb bags lb.	.20	.....	.20	.20	.20	.20
Blood Root bags lb.	.24	.25	.25	.24	.15	.09
Blueflag Root bags lb.	.20	.27	.27	.20	.20	.13
Boldo Leaves bales lb.	.15	.17	.17	.15	.15	.12½
Boneset Herb bales lb.	.09	.10	.10	.07½	.07½	.07
Leaves bales lb.	.11	.12	.12	.11	.09½	.....
Borage Flowers bales lb.	.16	.17	.17	.16	.17	.17½
Broomtop Herb Cut bales lb.	.10	.11	.11	.10	.10	.07½
Bryonia Root bags lb.	.10½	.11	.11	.10½	.10¼	.12
Buchu Leaves						
Buchu Leaves Short 250 lb bbls lb.	.44	.45	.50	.44	.48	1.40
Long bales lb.	.75	.80	.80	.75	.75	1.30
Buckbean Leaves bales lb.	.13	.15	.15	.13	.12½	.07½
Buckthorn Bark bags lb.	.05	.05½	.05½	.05	.05	.20
Berries bags lb.	.45	.50	.50	.45	.52½	.18
Burdock Root bags lb.	.12	.14	.14	.12	.11½	.07
Seed bags lb.	.65	.....	.....	.65	.58½	.08
Burgundy Pitch, 110 stand gross for net lb.	.08	.09	.09	.08	.08	.04
Imported lb.	.12	.13	.13	.12	.11½	.06½
Calabar Beans bags lb.	.25	.27	.27	.25	.27½	.25
Calamus Root, blchd cases lb.	.....	.40	.40	.37	.38½	.23
Unbleached, bags lb	.06¼	.07	.07	.06½	.06½	.09
Calendula Petals, imp bales lb.	.90	.95	.95	.90	.82	.40
Calisaya Bark, bales lb.	.23	...	.....	.23	.25	.17
Powdered, bbls lb.	.28	.32	.32	.18	.28	.....

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Aloes, Cape
Arabic, Cleaned Sorts
Asafoetida
Belladonna Leaves
Belladonna Root
Buchu Leaves
Cardamon Seed
Cantharides
Chamomile Flowers
Dandelion Root
Digitalis Leaves
Doggrass Root
Fennel Seed
Foenugreek Seed
Fumigating Pastilles
Gamboge
Gentian Root
Hellebore Root
Henbane Leaves
Henna Leaves
Insect Flowers
Juniper Berries
Lavender Flowers
Licorice Cuttings
Licorice Root 1 lb. & 5 lb. bundles
Orris Root, Florentine
Olive Oil
Quassia
Quince Seed
Rhubarb Root
Sage Leaves
Senna Leaves
Senna Pods
Soap Castile
Soap Bark, Cut
Squill Root
Valerian Root

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Drugs and Spices

Standard Purchasing Power of the Dollar: July 1914 $1.00 - Jan. 1927 68.7c - July 1927 71.7c - Jan. 1928 65.6c

Areca Nuts — Still quiet and the only feature was a change in the price of powdered nuts, to 17c per pound, in reflection of past declines in quotations for whole nuts.

Arnica Flowers — The market is still held at $1.48 @ $1.50 per pound. In some quarters, price of $1.45 per pound were named but are unavailable now and the quantities involved were not of sufficient size to weaken the market. Stocks in all directions are exceedingly small and $1.48 per pound may be done in one source only. Sales have been made as high as $1.55 per pound and any sizable demand will create further advances in price. At present, the demand is rather light, most consumers are reticent to buy at the high prices.

Asafoetida — There has been no change in price or position. The demand is rather routine, new business is not very salient and supplies are of normal quantity. All sellers name 30c @ 31c per pound for the gum, 65c @ 68c lb. for powdered material and fancy tears fetch 60c @ 70c per pound.

Bayberry Bark — The market is in very small supply and only one supplier is known to have supplies. With the gradual absorption of stocks, prices advanced correspondingly from 12c per pound to 18c per pound. It was rumored that substantially higher prices were quoted recently and higher prices will doubtlessly follow this week. This is merely a temporary condition and the arrival of supplies from the primary market should soon drive the market close to 12c per pound.

Belladonna Leaves — Price weakness was the dominant feature of the market throughout the month. Shading below the quoted figures, was common practice and finally the market precipitated to 20c @ 21c per pound. In one source, 19c per pound was named as the low figure and it is thought that even this price may be shaded readily. The foreign markets have been similarly weak, the Hamburg prices having declined more substantially than those here. London was also lower. Supplies are of good size and further declines would not be surprising.

Benzoin Gum — Siam gum is still unprocurable on the open market and prices are nominal. There are a few parcels of powdered gum at $.150 per pound and Sumatra gum is unchanged at 65c @ 68c per pound, but much stronger and likely to advance.

Bloodroot — Supplies in the hands of local sellers are not very large and prices are exceedingly firm at the current quotations of 24c @ 25c per pound, Collections in the country are reported to be normal.

		Current Market		1928 High	1928 Low	1927 Aver.	1914 July
Canary Seed, South America, bags	lb.	.04½	.05	.05	.04½	.04½	.06
Dutch, bags	lb.	.05¾	.06½	.06½	.05¾	.05¾	.09
Candelilla Wax, bags	lb.	.27	.28	.28	.27	.33	.22
Cannella Alba Bark, bales	lb.	.30	.32	.32	.30	.32	.08
Cannabis True, Imp, bags	lb.	.....	.....	.....	.....	.....	1.55
American (no assay), bale	lb.	.23	.....	.25	.23	.25	.26
USP	lb.	.22	.30	.30	.22	.2>	1918
Cantharides, Chinese, cases	lb.	.70	.72	.72	.70	.70½	.63
Powdered, bags	lb.	.80	.88	.88	.80	.90	1.60
Russian, cases	lb.	.60	.65	.65	.60	.60	2.00
Powdered, boxes	lb.	.80	.....	.80	.80	.73½	2.25
Caraway Seed, African, bags	lb	.12	.....	.12	.12	.12	1918
Dutch 11 lb bags	lb.	.12	.....	.12	.12	.11	.08
Cardamon Bleached, cases	lb.	.....	2.00	2.00	1.50	1.60	1.30
Decorticated, cases	lb.	1.35	1.55	1.55	1.35	1.55½	1.15
Carnauba Wax No. 1, bags	lb.	.57	...	.57	.57	.60	.45
No. 2 bags	lb.	.55	.....	.55	.55	.54	.42½
No. 2 N Country, bags	lb.	.36	.....	.36	.36	.41½	.32
No. 3 N Country, bags	lb.	.34	...	.34	.34	.36	.29
No. 3 Chalky, bags	lb.	.39	.40	.40	.39	.39	.33
Cascara Amarga, 150 lb bbls	lb.	.90	.....	.90	.90	.90	.....
So called bales	lb.	.60	.85	.85	.60	.62	.82
Cascara							
Cascara Sagrada, bales, 1923 bark	lb.	.20	.....	.20	.20	.20	.....
1924 bark	lb	.18	.....	.18	.18	.18	.....
1925 bark	lb.	.16	...	.16	.16	.16	.....
1926 bark	lb	.15	.16	.16	.15	.15	.....
1927 bark	lb.	.14	.15	.15	.14	.90	.....
Cascarilla Bark, quills, bales	lb.	.90	1.00	1.00	.90	.....	.22
Siftings, bbls	lb.	.65	.....	.65	.65	.65	.11
Cassia Batavia No. 1 bbls,	lb.	.13½	.....	.14½	.13½	.12½	.18
Shortstick, bales	lb.	.11½	.....	.11½	.11½	.11½	.11
Batavia No. 3, bales	lb.	.....	.10¾	.10¾	.09¾	.09¾	1918
China Select Rolls, cases	lb.	.12	.13½	.13½	.12	.12	.07½
Broken, bales	lb.	.09	.09½	.09½	.07½	.07½	.05½
Saigon, thin	lb.	.22	.23	.23	.22	.18½	.28½
Buds, cases	lb.	.18½	.19	.19	.18½	.17½	.11½
Fistula, baskets	lb.	.15	.16	.24	.15	.16½	.06½
Catnip, Herb, bales	lb.	.18	.23	.23	.18	.18	.08½
Celery Seed, bales	lb.	.19	.20	.20	.19	.19½	.17½
Ceresin Wax, White, bags	lb.	.15	.20	.20	.15	.15	.14
Yellow, 200 lb bags	lb.	.11	.14	.14	.11	.11	.12
Imp., 100 lb bags	lb.	.25	.38	.38	.25	.25	.....
Chamomile							
Chamomile Flowers, bales	lb.	.....	.33	.33	.24	.21½	.15
Hungarian, cases	lb.	.19	.19½	.19½	.19	.26½	.35
Charcoal Willow, powd, bbls	lb.	.06	.06½	.06½	.06	.06	.....
Wood, powd, bbls	lb.	.04	.05	.05	.04	.04	.04
Chestnut Bark	lb.	.07	.08	.08	.07	.....	.....
Leaves bales	lb.	.06	.06½	.06½	.06	.06	.05
Chicle Gum, lb bbls	lb.	.58	.75	.75	.58	.58	.60
Chiretta, bales	lb.	.25	.....	.25	.25	.25	.14
Cinchona							
Cinchona Bark, Red Quill, bales 10 inch	lb.	.65	.....	.65	.65	.68½	.....
20 inch	lb.	.68	.....	.70	.68	.70	.....
40 inch	lb.	.85	.....	.85	.85	.85	.....
Chips, 150 lb bags	lb.	.23	.27	.27	.23	.23	.12
Cinnamon, Ceylon No. 1, bales	lb.	.62	...	.62	.62	.59	.30
No. 2 bales bend	lb.	.61	.....	.61	.61	.58	.29
No. 3 bales	lb.	Nom.	.....	Nom.	Nom.	.44½	.28
Clover Tops, Red, bags	lb.	.10	.11½	.11½	.10	.11½	.08
Cloves, Zanzibar, 135 lb bbl	lb.	.18	.19	.19	.18	.20	.15½
Cochineal, Black	lb.	.69	...	.69	.69	.69	.44
Silver	lb.	.85	.....	.85	.85	.84½	.42
Cohosh Root, Black, bags	lb.	.09	.....	.09	.09	.07½	.04
Blue, bags	lb.	.09	.....	.09	.09	.08	.05
Colchicum Root, bags	lb.	.06	.07	.07	.06	.06½	.11
Seed, bags	lb.	.25	.....	.25	.25	.2?	.20
Columbo Root							
Columbo Root, bags	lb.	.06½	.07	.07	.05	.4¾	.06
Colocynth Pulp, bales	lb.	.85	.90	.90	.85	.81	.23
Coltsfoot Leaves, bags	lb.	.10	.12	.12	.10	.10	.06
Comfrey Root, bags	lb.	.14	...	.14	.14	.10¾	.08
Condurango Bark, bags	lb.	.14	.....	.14	.14	.13	.12½
Conium, Herb, bags	lb.	.11	.12	.12	.11	.11	.06
Seed, bags	lb.	.11	.12	.12	.10	10	.09
Copaiba Balsam Para, see Balsams		.....					
Coriander Seed, Bombay, bags	lb.	Nom.	.....	Nom.	Nom.	.07½	.08
Morocco, bags	lb.	.09½	.10	.10	.09½	.05½	.4½
Bleached, bags	lb.	.16	.19	.19	.16	.12½	.05
Corn Silk, bales	lb.	.06	.....	.06	.06	.06	.08
Cotton Root Bark, bales	lb.	.13	.13½	.13½	.13	.12	.06½
Cowhage, 1 oz tins	lb.	1.00	.....	1.00	.95	.96½	.....
Cramp Bark, So called bales	lb.	.06	.07	.07	.06	.06½	.06½
True, bags	lb.	.....	.55	.55	.50	.49	1918
Cranesbill Root, bags	lb.	.10	.....	.12	.10	.11	.07½
Cubeb Berries							
Cubeb Berries, XX bags	lb.	.48	.53	.53	.48	.48	.42
Powdered, boxes	lb.	.50	.55	.55	.50	.57½	.42
Culvers Root, bags	lb.	.....	.22	.22	.19	.18	.14
Cumin Seed, Malta, bags	lb.	.14	...	.15	.14	.12½	.10
Morocco, bags	lb.	.14	.....	.15	.14	.12½	1918
Cuttlefish, Bone Trieste, Straps	lb.	.13	.....	.13	.13	.13	.14½
French, boxes	lb.	.12½	.15	.15	.12½	.12½	.12½
Powdered, bbls	lb.	.09	.10	.10	.09	.09	.05
Broken, bales	lb.	.05	.....	.05	.05	.05½	.05
Damiana Leaves, bales	lb.	.23	.30	.30	.23	.30	.08
Dandelion Root, Imp, bags	lb	.15	.16	.16	.14	.14½	.10½

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Drugs and Spices

Standard Purchasing Power of the Dollar: July 1914 $1.00 - Jan. 1927 68.7c - July 1927 71.7c - Jan. 1928 65.6c

Buchu — There is a decided lack of business in this commodity and sellers' prices have been reduced to 44c @ 45c per pound and in some instances, inquiries were quoted at 43c per pound. Shading is evident and the future trend is hinged upon the immediate demand. Long leaves are named at unchanged at 75c @ 80c per pound and not featured with either heavy demand or heavy supply.

Buckthorn Bark — Strong at current prices of 5c @ 5½c per pound. Berries stengthened somewhat but were still selling at 45c @ 50c per pound. The recent weakness apparent in the latter market has been entirely removed by a steady absorption of stocks.

Cardamons — This market has advanced radically since last reported. Replacements from India, have not been sufficient to meet the good sized demand now current and consequently prices for bleached, have been advanced to $2.00 per pound. The heavy local supplies of decorticated, have kept the prices down to the current levels of $1.35 @ $1.55 per pound.

Cascara Sagrada — Rumors are still heard of shading below the quoted figures. There are ample supplies of 1923 bark offered at 20c per pound, but the subsequent years crops may be bought at somewhat lower figures than those named. This year's bark will not be available until late Spring or early Summer.

Cassia — Holders report a heavy amount of trading during the past two weeks and prices have generally strengthened. Imports have been likewise heavy but most of the recent arrivals have been utilized in fulfilling forward orders.

Chamomile Flowers — Hungarian flowers are unchanged and consumers are buying freely at the current levels. Romans are much higher on spot owing to a local scarcity and are named at 33c per pound.

Cinchona — A reduction of 2c per pound was made in the price of 20 inch quills. General weakness and lower prices abroad are said to be responsible for the move. The remaining grades are unchanged, but supplies are abundant.

Columbo Root — Somewhat stronger on spot at 6½c @ 7c per pound as compared with 5c @ 6c per pound previously quoted. Most qutoations are made at the low range of the market.

Condurango Bark — Sellers who had been naming 16c per pound as the low price for this commodity have reduced prices to meet quotations on the general market of 14c per pound.

Cramp Bark — A 5c per pound advance for true bark took effect this week reflecting in the strength exhibited for

		Current Market		1928 High	1928 Low	1927 Aver.	1914 July
Deer Tongue Leaves, bales	lb.	.15	.18	.18	.15	.19	.07½
Digitalis Leaves, bales	lb.	.38	.42	.42	.30	.30	1918
Dill Seed, bags	lb.	.07	...	.07	.07	.05½	.07½
Cleaned, bags	lb.	.08	.....	.08	.08	.08	.08
Dogwood Bark, Jamaica bags	lb.	.09½	.10½	.10½	.09½	.09½	.05
American bales	lb.	.06½	.....	.06½	.06½	.06½	.07½
Doggrass Root USP. cut bags	lb.	.12	.12½	.12½	.12	.13	.06½
Dragons Blood Mass, cases	lb.	.65	.70	.70	.65	.69	.25
Reeds, boxes	lb.	.95	.....	.95	.95	.95	.45
Echinacea Root, bags	lb.	.30	.33	.33	.30	.30	.22
Elcampane Root, bags	lb.	.08	.09	.09	.08	.08	.06½
Elder Flowers, bags	lb.	.19	.20	.20	.19	.15	.11
Elemi Gum, 85 lb cases	lb.	.....	.26	.26	.20	.20	.....
Elm Bark, bundles	lb.	.26	.....	.26	.24	.21½	.17
Grinding bags	lb.	.13½	.14	.14	.13½	.13½	.09
Powdered, bbls	lb.	.20	.22	.22	.20	.20½	.....
Ephedra Vulgaris, bales	lb.	.24	.2[illegible]	.25	.24	...31½	.....
Ergot							
Ergot, 150-200 lb bags	lb.	1.45	1.65	1.65	1.45	1.22	.....
Eucalyptus Leaves, bales	lb.	.....	.10	.10	.07	.05	.04
Euphorbia Pilulifera, Herb, bags	lb.	.08	.08½	.08½	.08	.08	.08
Euphorbium Gum, cases	lb.	.14	.20	.20	.14	.14	.12
Powdered, boxes	lb.	.25	.....	.25	.25	.25	...
Fennel Seed, French, bags	lb.	.17½	.19	.19	.17½	.11½	.06½
German, bags	lb.	.28	.30	.30	.28	.24½	.10
Fenugreek Seed, 200 lb bags	lb.	.05	.06	.06	.05½	.05½	.03
Fish Berries, 100-125 lb bag	lb.	.06	.07½	.07½	.06	.06	.03½
Flax Seed, Whole 182 lb bbls	lb.	14.00	14.75	14.75	14.00	14.10	10.00
Ground 180 lb. bbls	lb.	.08	.08½	.08½	.08	.08	1918
Flea Seeds Black bags	lb.	.22	.25	.25	.16	.38	....
Fringe Tree Bark or Root bags	lb.	.23	.25	.2[illegible]	.23	.22	17½
Fumigat Pastilles Red Bulk lb boxes	lb.	.30	.35	.35	.30	.30	.20
Galangal Root bags	lb.	.11	.13	.13	.11	.14	.08
Galbanum Gum, cans	lb.	1.00	.....	1.00	1.00	1.59	.60
Gamboge Gum, 100 lb cases	lb.	.....	1.25	1.30	1.20	1.09	.66
Powdered, cases	lb.	.....	1.35	1.35	1.25	1.22½	.65
Gelsemium Root, bags	lb.	.09	.10	.10	.09	.09	.05
Gentian Root							
Gentian Root, bags	lb.	.09½	.11	.11	.09½	.08½	.06½
Ground bbls, boxes	lb.	.13	.14	.14	.13	.11½	.....
Powdered, bbls, boxes	lb.	.13	.....	.13	.13	.02½	.....
Ginger, African, bags	lb.	.10½	.11	.11	.10½	.09½	.05
Jamaica Grinding, bags	lb.	.18	.....	.18	.18	.14½	.15
Cachin, ABC & Lemon, bags	lb.	.16	.17	.17	.16	.14	.06½
Ginseng Root, cultivated cs	lb.	8.00	10.00	10.00	8.00	8.00	5.00
Wild Southern, cases	lb.	8.50	10.00	10.00	8.50	8.50	6.00
Fibers, cases	lb	3.75	4.00	4.00	3.75	3.75	.....
Golden Seal Root, bags	lb.	4.30	4.50	4.50	5.30	4.65	4.50
Powdered, boxes	lb.	5.00	5.25	5.25	5.00	5.26	5.15
Herb, barrels	lb.	1.25	1.30	1.30	1.25	1.25	.47
Grains of Paradise, bags	lb.	.45	.50	.50	.45	.40½	.15
Grindelia Robusta, Herb, bale	lb.	.09	.10	.10	.09	.09	.05
Guaiac Gum, 150 lb cases	lb.	.38	.40	.40	.38	.39	.27
Powdered, strained, 75 lb cs	lb.	.70	.75	.75	.70	.64½	1918
Guarana, tin cases	lb.	1.65	2.00	2.00	1.65	1.65	1.80
Gum, see Arabi Gum, etc	..						
Hellebore Root, Black, bbls	lb.	.05½	.06	.06	.05½	.05½	.06
Powdered	lb.	.12	.13	.13	.12	.11	...
White, 250 lb bbls	lb.	.07½	.08½	.08½	.07½	.07½	1918
Powdered	lb.	.12	.14	.14	.12	.11	.10
Helonias Root, bags	lb.	.80	.....	.80	.80	.74	.50
Hemp Seed, bags	lb.	.04½	.05	.05	.04½	.04½	.02½
Henbane Leaves, USP, bales	lb.	.21	.23	.23	.21	.25	.14
Henna Leaves							
Henna Leaves, bales	lb.	.12½	.13	.13	.12½	.12½	.13
Powdered	lb.	.16	.....	.16	.16	.16	.....
Honey, Calif., 120 lb cases	lb.	.11	.12	.12	.11	.11	1918
Hops, bales	lb.	.25	.26	.26	.25	.27	.17
Horehound, Herb, bales	lb.	.08½	.09	.09	.08½	.08½	.06½
Hydrangea Root, bales	lb.	.....	.09	.09	.08	.08½	.07
India Gum, see Karaya	..						
Insect Flowers	lb.	.23	.24	.24	.22	.22½	.18
Powdered, Pure, 200 lb bb	lb.	.36	.38	.38	.32	.26	.22
Ipecac							
Ipecac Root, Cartagena, bags	lb.	3.00	3.10	3.30	3.00	3.29	1.42½
Powdered, 220 lb bbls	lb.	3.50	3.60	3.65	3.50	3.74	1918
Rio Whole, bags	lb.	Nom.	.....	Nom.	Nom.	3.51	2.00
Powdered, 110 lb bbls	lb.	Nom.	.....	Nom.	Nom.	3.74	1918
Isinglass, American, 130 lb cases	lb.	.95	1.00	1.00	.95	.95	.71
Russian (Beluga), boxes	lb.	4.50	.....	4.50	4.50	4.50	3.50
Jaborandi Leaves, bales	lb.	.13	.....	.13	.13	.12	.14
Jalap Root, Whole, 150 lb bag	lb.	.16	.18	.18	.16	.17½	.21
USP, Powd, 250 lb bbls	lb.	.22	.24	.24	.22	.23½	.....
Japan Wax, 24 lb cases	lb.	.18½	.19	.19	.18½	.19½	.11
Job's Tears, White, bags	lb.	.15	.....	.15	.15	.15	.08
Juniper Berries							
Juniper Berries, 125 lb bags	lb.	.06	.06½	.07½	.06	.07	.03½
Sifted, bags	lb.	Nom.	.....	Nom.	Nom.	.....	.....
Kamala, boxes	lb.	.85	.90	.95	.85	.94½	.57
Karaya Gum, Powdered, bbls	lb.	.12	.13	.13	.12	.12	.15
Kava Kava Root, bags	lb.	.16	.....	.16	.16	.15½	.18
Kino Gum, Black, cases	lb.	.50	.55	.55	.50	.50	.22
Kola Nuts, 150 lb bags	lb	.09	.....	.09	.09	.09	.08
Kousso Flowers, bags	lb.	.70	.....	.70	.70	.72	.....
Lady Slipper Root, bags	lb.	.90	...	.90	.90	.62	.24
Larkspur Seed, bags	lb.	.....	.30	.40	.30	.61	.25

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CASCARA SAGRADA	JALAP ROOT
CASTILE SOAP	JUNIPER BERRIES
CHARCOAL, POWDERED	KAMALA
CHALK, HEAVY	KARAYA GUM
CHALK, LIGHT	LAVENDER FLOWERS
CHAMOMILE FLOWERS	LICORICE ROOT
CHERRY BARK, WILD	LODESTONE
CINCHONA BARK	NUTGALLS
COLOCYNTH PULP	NUX VOMICA
COUCH GRASS, CUT	OLIBANUM GUM
DIGITALIS LEAVES	ORRIS ROOT
DRAGON'S BLOOD	RHUBARB ROOT
ELM BARK	SARSAPARILLA ROOT
FENNEL SEED	SASAFRAS BARK OF ROOT
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Standard Purchasing Power of the Dollar: July 1914 $1.00 - Jan. 1927 68.7c - July 1927 71.7c - Jan. 1928 65.6c

some time past. Two weeks ago some sellers named 52c @ 53c per pound and with the interest shown by consumers on the rising market, further advances took place. So-called is soft and may be procured at 6c @ 7c per pound.

Dandelion Root — Now priced at 15c @ 16c lb. and in some quarters 17c per pound. There has been an exceedingly heavy call for this root during the past two months, several new users have come into the market. All low quality root which had been selling at 14 and 13½c per pound has been removed from the market.

Elder Flowers — Prices are rigidly firm at 19c @ 21c per pound and more inclined toward the higher figure. Advances would not be surprising.

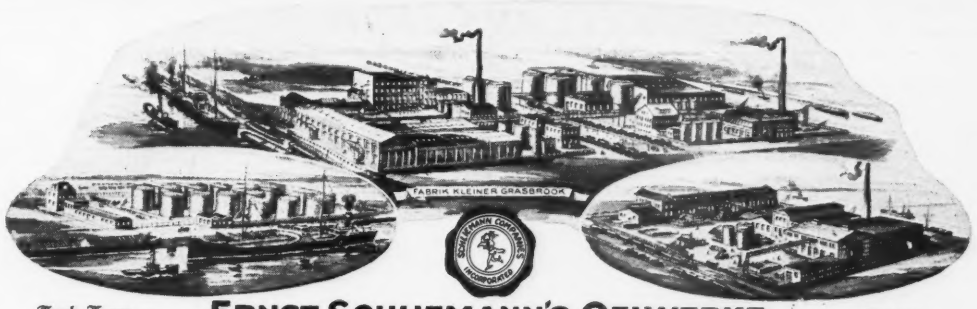
Elm Bark — The local market was advanced 2c per pound over the month. All holders now possess prime, best quality goods and attribute the rise in price to increased costs in procuring the first quality material. Ground and powdered remain unaltered.

Ergot — The market was devoid features during the month and all business proceeded in the manner that has characterized the market for the past six weeks. Most of the larger buyers are covered for some time to come and firm orders may be easily filled in one source at $1.45 per pound and lower for quantity. Another holder names $1.45 per pound while the remaining seller's prices vary widely between $1.75 @ $1.95c per pound. The smaller consumers are covering cautiously at $1.55 @ $1.65 lb. The speculative interests refuse to make prices public but it is definitely established that their sales, if any, are of little consequence and make little impression on the market. The Department of Agriculture is no longer blatantly scored for their tactics and the market is nearer to normalcy at this time that at any other since the initial appearance of the speculative venture. The Hamburg market is also reported to be lower and supplies of prime quality material are more easily available.

Gamboge Gum — In a very firm position and unavailable below the current market figures. There is a decided sacrcity on spot and to-day's prices represent an advance of 5c @ 10c per pound since last reviewed. Further advances in the immediate spot market are most likely.

Henna Leaves — There have been no change in prices, business in proceeding normally with ample supplies in transit from Egypt. Whole leaves are offered at 12½c @ 13c per pound and powdered material is named at 16c per pound.

		Current Market		1928 High	1928 Low	1927 Aver.	1914 July
Laurel Berries, bags	lb.	.08	.09	.09	.08	.08	.05
Leaves, Greek, bags	lb.	.05½	.07	.07	.05½	.05½	.10
Italian, bales	lb.	.05	.....	.05	.05	.05	.03½
Lavender Flowers, Ordinary	lb.	.30	.35	.35	.30	.30	.20
Selected	lb.	.45	.55	.55	.42	.44½	.28
Lemon Peel, bags	lb.	.09½	.10	.10	.09½	.10	.06½
Licorice Root							
Licorice Root Russian, Whole bbls	lb.	.12	.18	.18	.12	.12	.06
Spanish Natural bales	lb.	.05½	.07	.07	.05½	.05½	.04½
Powdered bbls	lb.	.09	.10	.10	.09	.09	.....
Selected 2 & 5 lb bbls	lb.	.14	.16	.16	.14	.13	.09
Cutting, 125 lb bags	lb.	.06½	.07	.07	.06½	.06½	.06½
Turkish, 150 lb bales	lb.	.05	....	.05	.05	.05	.....
Linden Flowers with leaves, bales	lb.						
Bales	lb.	.33	.....	.33	.30	.22	.35
Without leaves, bales	lb.	.....	.32	.32	.27	.23	1918
Liverwort Leaves, bales	lb.	.16	.18	.20	.16	.17½	.....
Lobelia, Herb, bales	lb.	.18	.20	.20	.16	.63½	.09½
Seed, bags	lb.	.75	.75	.75	.75	.88	.25
Lovage Root, Imp, bags	lb.	.25	.27	.27	.25	.21½	.22
Lupulin N F., tins	lb.	1.75	.....	1.75	1.75	1.61	1.75
Lycopodium, 88 lb. cases	lb.	.74	.85	.85	.74	.81	.41
Mace							
Mace Siauw No. 1, cases	lb.	.92	.93	.93	.88	.95	.....
Banda No. 1, cases	lb.	1.00	1.02	1.00	.94	1.00	.64
Batavia No. 2, cases	lb.	.65	.....	.68	.65	.73	.49
Malva Flowers, Blue, bales	lb.	.50	.....	.50	.50	.46	.30
Black, bales	lb.	.45	.60	.60	.45	.49	1918
Leaves, bales	lb.	.14	.15	.15	.14	.14	....
Manaca Root, bales	lb	.22	.....	.22	.22	.61	.60
Manna, Large Flake, cases	lb.	.65	.....	.70	.65	.....	.85
Small Flake, cakes	lb.	.....	.50	.60	.50	.53	.39
Sorts, cases	lb.	.45	.....	.50	.45	.43	.....
Mandrake Root bags	lb.	.....	.18	.....	.....	.13	.11
Marjoram, Herb, French No. 1, bales	lb.	.....	.....	.....	.....	.21½	.10
French No. 1 bales	lb	.14½	.15½	.15½	.14½	.22	.10
German, bales	lb.	.14	.15½	.15½	.14½	.....	.18
Mastic Gum, 120 lb cans	lb.	.60	.65	.65	.60	.52½	.62
Matico Leaves bales	lb.	.35	.....	.45	.35	.83	.25
Mesereon Bark bags	lb.	.....	.....	.....	.....	.12½	.09
Millet Seed Yellow, bags	lb.	.04½	.04½	.04½	.04½	.04	.01½
Montan Wax, Crude, bags	lb.	.06½	.07	.07	.06½	.06	.06½
Bleached, bags	lb.	.25	.28	.28	.25	.25	.24
Moss, Iceland, bales	lb.	.07½	.08	.08	.07½	.07½	.05½
Select	lb.	.15	.....	.15	.15	.15	.....
Irish, Bleached, bales	lb.	.11	.12	.12	.11	.11	.08
Mullein Flowers, tins	lb.	2.25	.....	2.25	2.25	2.22	.51
Leaves, bales	lb.	.07½	.08	.08	.07½	.07½	.06
Musk Root, Russian, bags	lb.	.18	.25	.25	.18	.26½	.12
Mustard							
Mustard Seed, Bombay Brown, bags	lb.	.05½	.06½	.06½	.05½	.05½	1918
California, Brown, bags	lb.	.07½	.08	.08	.07½	.08½	.05
Yellow, bags	lb.	.16	.....	16	.16	.16	.07
Chinese, Yellow, bags	lb.	.06	.06½	.06½	.06	.07	.....
Dutch, Yellow, bags	lb.	.07½	.07½	.07½	.07½	.08	1916
English, Yellow, bags	lb.	.08½	.09	.09	.08½	.09½	.06
Myrrh Gum, 200 lb, cases	lb.	.70	.75	.75	.62	.30½	.16
Nutgalls, Chinese, bags	lb.	.22	.....	.22	.22	.22	.15
Aleopy, bags	lb.	.25	.....	.25	.25	.26	.15
Powdered, bags	lb	.23	.....	.23	.23	.20	.....
Nutmegs, 110'0 cases	lb.	.33½	.....	.33½	.33½	.36	.13½
75's & 80's cases	lb.	.42	.....	.42	.42	.47	.15
Grinding, bags	lb.	.48	.49	.59	.48	.47½	.13½
Nux-Vomica							
Nux-Vomica Buttons, bag	lb.	.05	.05½	.05½	.05	.08	.04
Powdered, 200 lb bbls	lb.	.08	.08½	.08½	.08	.08	.07½
Oak Bark, Red, bags	lb.	.06½	.....	.06½	.06½	.06½	.08
White, bags	lb.	.04½	.06	.....	.06	.06	.03
Olibanum Gum 280 lb cases Siftings	lb.	.....	.13	.11½	.13	.....	.....
Tears No. 1, all white	lb.	.25	.26	.....	.....	.10½	.04½
No. 1 Extra	lb.	.27	.29	.29	.27	.27	.....
No. 2	lb.	.20	.....	.20	.18	.16½	.....
No. 3	lb.	.14	.15	.15	.14	.11½	.....
Opium Gum, USP, cases	lb.	12.00	13.00	13.00	12.00	12.00	7.70
Granular, cans	lb.	13.00	14.00	14.00	13.00	13.00	8.75
Powdered, USP, cans	lb.	13.00	14.00	14.00	13.00	13.00	8.65
Orange Flowers, cases	lb.	.25	.....	.25	.25	.25	.....
Peel, Bitter, bags	lb.	.10	.....	.10	.10	.10	.07½
Sweet, bags	lb.	.08½	.....	.08½	.08½	.08½	.04
Orris Root							
Orris Root Flor. bid, bags	lb.	.10	.11	.11	.10	.09	.19
Powdered, 200 lb bbls	lb.	.13	.15	.15	.13	.12½	1918
Verona, bags	lb.	.09	.10	.10	.09	.08½	.14
Powdered, 200 lb bbls	lb.	.13	.14	.14	.13	.12	.....
Fingers, boxes	lb.	.90	.....	.90	.80	.64	.75
Ozokerite Wax, Brown, Hard	lb.	.....	.....	.....	.....	.....	.21
Bags	lb.	.24	.25	.25	.24	.24	.....
Green, Hard, bags	lb.	.30	.31	.31	.30	.30	.25
Yellow, Refined, bags	lb.	.37	....	.37	.37	.37	.25
Papain, Crude, 150 lb cases	lb.	4.50	4.90	4.90	4.50	4.85	2.80
Pure, Powdered, 10 lb bot	lb.	4.25	4.35	4.35	4.25	5.25	.....
Paprika, bags	lb.	.28	.29	.29	.28	.33	.....
Pareira Brava Root, bags	lb.	.11	.12	.12	.11	.11	.14
Parsley Seed, bag	lb.	.25	.....	.25	.25	.27	.20



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Drugs and Spices

Standard Purchasing Power of the Dollar: July 1914 $1.00 - Jan. 1927 68.7c - July 1927 71.7c - Jan. 1928 65.6c

Insect Flowers — The local market is strong and prices are advanced over previous quotations. Local prices, are reflective of conditions in the primary market and holders name 36c @ 38c per pound for powdered red. The situation is perplexing to both sellers and consumers, opinion is divided as to the soundness of the ability of foreign sellers to inflate the market. Some believe that the Japanese are not financially able to uphold the present market and others have belief in the maintainance of prices are buying accordingly. Conditions during this month and early March should indicate whether this move is sound enough to be held over the buying period.

Ipecac — Cartegena root has been reduced. Whole roots are offered freely at $3.00 @ $3.10 per pound and powdered roots are named at $3.50 @ $3.60 per pound. This decline is merely a return to the former prices, when Rio ipecac was available.

Juniper Berries — Prices precipitated to 6c @ 6½c per pound. Easiness of demand is responsible for the decline, although parcels of off quality berries are prominent.

Kamala — Recent arrivals from the primary market have exceeded the slow demand and prices have been lowered to 85c @ 90c per pound, in effort to stimulate the demand.

Kava-Kava Root — The Hawaiian suppliers are firm in their demands and the market here is likewise sound at 16c per pound.

Lavendar Flowers — Selected flowers were difficult to obtain and asking prices varied widely. The lowest quotation was 45c per pound and other figures ranged upwards as high as 55c per pound. Ordinary flowers remained at the same basis, without very much demand. The rising market has aroused a great deal of interest among consumers and there is talk of advancing the price of selected.

Linden Flowers — An increase in demand has absorbed a large portion of the local stocks and substantial advances have taken place. At present, the market is named at 33c per pound and higher for flowers with leaves and 32c per pound without leaves. Holders are not disposed to accept lower bids.

Mace — In a much stronger position in Holland and buyers here have snatched up parcels on spot and afloat in fear of further rises. Amsterdam reports indicate that there were 189 tons of mace on hand at the end of the past year and that stocks in London warehouses at that time amounted to 215 packages and 893 cwts.

Manna — Heavy replacements from abroad caused sharp declines in local

		Current Market		1928 High	1928 Low	1927 Aver.	1914 July
Passion Flower, bales	lb.	.07	.07½	.07½	.07	.07	.08
Patchouli Leaves, bales	lb.	.28	.....	.26	.26	.26	.10
Pennyroyal, Herb, 100 lb bags	lb.	.07	.....	.07	.07	.07	.07
Leaves, 100 lb bags	lb.	.14	.16	.16	.14	.16	.04
Pelitory Root, bales	lb.	.18	.19	.19	.18	.16	.20
Pepper, Singapore, Black, bags	lb						
Bla k bags	lb.	.30	.32	.32	.30	.30	.11½
White, bags	lb.	.54½	.55	.55	.54½	.48	.18½
Aleppy, bags	lb	.36½	.37	.37	.36½	.30½	.11½
Lempong, bags	lb.	.38	.....	.38	.38	.31	.10½
Tellecherry, bags	lb.	.38	.....	.38	.38	.31	.11½
Muntock, bags	lb.	.53	.....	.53½	.53	.43½	.....
Red Chillies, Japan, No. 1, bags	lb.						
Japan No. 1 bags	lb.	.26	.....	.26	.26	.26	.14
Mombasa, bags	lb.	.38	.39	.39	.38	.30	.14½
Capsicum, Bombay, bags	lb.	.21	.22	.22	.21	.21	.....
Peppermint							
Peppermint Leaves, Imp, bales	lb.	.50	.....	.50	.50	.50	.42
Domestic, bales	lb.	.24	.40	.40	.24	.24	.11
Herb, bundles	lb.	.12	.....	.12	.12	.12	.....
Peru Balsam, see Balsams	lb						
Pichi Leaves, bags	lb.	.13	.14	.14	.13	.13½	.12
Pimento Select, bags	lb.	.16½	.17	.17	.16½	.17	.04½
Pink Root, True, bags	lb.	.62	.....	.62	.62	.53½	.65
Pitch Burgundy, see Burgundy Pitch							
Pleurisy Root, bags	lb.	.22	.....	.22	.22	.20	.15
Poke Berries, bags	lb.	.....	.30	.30	.20	.26	.08
Root, 200 lb bales	lb.	.09	.....	.09	.09	.09	.05½
Pomegrant Bark of Root, bags	lb.						
Bags	lb.	.25	.44	.44	.25	.25½	.12
Bark of Fruit, bags	lb.	.30	.....	.30	.30	.30	.06
Bark of Tree, bags	lb.	.21	.....	.21	.21	.21	.....
Poppy							
Poppy Flowers, Red, bags	lb.	.60	.65	.65	.60	.60	.40
Heads, bags	lb.	.50	.....	.50	.50	.50	.25
Seed, Dutch, bags	lb.	.11	.12	.12	.11	.13	.06½
German, bags	lb.	.10	.....	.10	.10	.10	.....
Blue Indian, bags	lb.	.10½	.....	.10½	.10½	.10½	1917
White, Indian, bags	lb	.25	.....	.25	.25	.25	1917
Prickly Ash Bark, Southern, bags	lb.	.14	.16	.16	.14	.14	.14
Southern bags	lb.	.13½	.14	.16	.13½	.14	.14
Northern, bags	lb.	.20	.25	.25	.20	.21	.25
Berries, bags	lb.	.....	.22	.15	.14	.14	.08
Prince's Pine, bales	lb.	.....	.17	.13	.12	.12	.30
Pulsatilla, Herb, bags	lb.	.....	.14	.25	.16	.16	.12
Pumpkin Seed, bags	lb.	.16	.....	.06½	.06½	.06	.06½
Quassia Chips, bags	lb.	.06½	.....	.36	.36	.44½	.11
Quebracho, bulk, 125 lb bbl	lb.	.....	.35	.09	.07½	.07½	.....
Queen of the Meadow, Herb	lb.	.07	.08	.08	.07	.07	.07
Root, bags	lb.	.....	.07	.....	.....	.....	.....
Quince Seed bags	lb.	.65	.75	.75	.65	.60	.60
Cape, bags	lb.	1.25	1.50	1.50	1.25	1.16½	.56
Rape Seed, South American bags	lb.	.04½	.05	.05	.04½	.05	.....
Dutch, bags	lb.	.05½	.06	.06	.05½	.08	.....
Japanese, small bags	lb.	.06½	.07	.07	.06½	.06½	1916
Raspberries, Dried, bbls	lb.	.85	.....	.85	.85	1.03	.27
Red Saunders, bags	lb.	.08	.....	.08	.08	.08	.....
Ground	lb.	.12	.....	.12	.12	.12	.....
Rhatany Root, bags	lb.	.11	.12	.12	.11	.10	.11
Rhubarb Root, HR, cases	lb.	.40	.42	.45	.43	.45	.21
Powdered, bbls	lb.	.48	.50	.53	.50	.56	.....
Rosemary Leaves, bales	lb.	.....	.06	.06	.05	.05	.03
Flowers cases, bales	lb.	.25	.30	.30	.25	.25	1918
Rose Petals, pale	lb.	.45	.....	.38	.38	.30	.18
Red	lb.	1.80	2.20	2.20	1.80	1.85	1.75
Rue, Herb, bales	lb.	.18	.20	.20	.18	.18	.08½
Sabadilla Seed, bags	lb.	.30	.25	.35	.30	.33	.15
Powdered, bbls	lb.	.32	.33	.33	.32	.39	.....
Saffron							
Saffron Flowers, American, bales	lb.	.....	.35	.38	.36	.39	.44
Valencia, 1 lb cans	lb.	15.00	16.00	16.00	15.00	17.00	11.50
Sage Dalmatian, bales	lb.	.07	.....	.05½	.05½	.06	.04
Greek, bales	lb.	.04½	.....	.04½	.04½	.04½	1918
Sandarac Gum, 300 lb bbls	lb.	.30	.35	.35	.30	.30	.19
Sarsaparilla Root, Honduras, bales	lb.	.55	.....	.52	.52	.....	.65
Mexican, bales	lb.	.27	.29	.29	.27	.34½	.30
Sassafras Bark, Ordinary, bales	lb.	.16	.17	.17	.16	.15	.12
Select, bales	lb.	.26	.27	.27	.26	.26	.16
Savory Leaves, bales	lb.	.08	.09	.09	.08	.08	.03½
Saw Palmetto Berries, bags	lb.	.17	.20	.20	.17	.64	.09
Scammony Resin, boxes	lb.	1.30	1.35	1.35	1.30	1.30	1.75
Root, bags	lb.	.08½	.....	.08½	.08½	.08½	1918
Senega Root, bags	lb.	1.27	1.30	1.30	1.27	.90	.50
Senna							
Senna Alex., 150 lb cases	lb.	.25	.30	.30	.25	.23	.35
Half leaf, 150 lb cases	lb.	.13	.15	.15	.13	.13	.30
Sifting, 400 lb bales	lb.	.10½	.11	.11	.10½	.10½	.13
Pods 3 0 lb bbls	lb.	.17	.18	.18	.17	.....	.....
Powdered, 200 lb bbls	lb.	.16	.17	.17	.16	.17½	1918
Tinnevelly, Bold, 350 lb bbls	lb.	.17	.20	.20	.17	.17	.06
Medium Leaf, bbls	lb.	.12	.13½	.13½	.12	.12	.08½
Small Leaf, bbls	lb.	.07½	.08½	.08½	.07½	.07½	.....
Pods, 350 lb bbls	lb.	.....	.10	.13	.11	.....	.05
Powdered, 200 lb bbls	lb.	.11	.13	.13	.11	.10½	1918
Serpentaria Root, bags	lb.	.75	.77	.77	.75	.76	.42

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Drugs and Spices

Standard Purchasing Power of the Dollar: July 1914 $1.00 - Jan. 1927 68.7c - July 1927 71.7c - Jan. 1928 65.6c

prices. Large flake was lowered to 65c per pound, small flake to 50c per pound and sorts were offered at 45c @ 47c per pound. These prices are not liable to any immediate advance.

Mandrake Root — Holders advanced their prices from 15c @ 16c per pound to 18c per pound owing to the decreasing amount of stocks on hand.

Mastic Gum — Continue scarce and at high prices. Prices have remained unchanged but there is not very much material to be had.

Myrrh Gum — A scarcity of spot supplies is still the dominant feature of the market and the outlook has not been altered . There have been several parcels imported with the past two weeks but it is not yet known whether the material is of sufficient quality to pass the regulations of the Department of Agriculture. One substantially sized lot was known to have been destroyed by a recent fire aboard the S&S President Polk. To-day's prices are 70c @ 75c per pound and named by one seller only.

Orris Root — Orris finger advanced 10c per pound to 90c per pound owing to the depression of stocks caused by a heavy demand.

Prickly Ash Berries — A marked shortage was seen on the market as prices advanced to 22c per pound.

Prince's Pine — The recent Vermont flood has had it's effect on this market, supplies are scarce and collectors are not inclined to gather the material. Spot quotations are named at 17c per pound. It is most probable that collectors will be lured into gathering again in view of the fancy prices obtainable.

Rhubarb Root — Heavy supplies from the country have necessitated a decline in prices for both whole root and powdered. The former is offered at 40c @ 42c per pound and powdered is named at 48c @ 50c per pound.

Saw Palmetto Berries — Prices descended to 15c @ 16c per pound and possibly lower on a firm bid. The market is grossly oversupplied and the interest of consumers is far behind the normal amount shown.

Senega Root — Primary market dealers have not yielded for general business but good-sized orders, may be purchased at liberal concessions from to-day's prices.

Squills — White were again higher and still in a strong position and not immune from further advances.

Stramonium Leaves — Higher in all quarters at 19c @ 20c per pound. The recent heavy interest is responsible for the upward movement also reflecting in the efforts of some sellers to advance the market some weeks ago.

		Current Market		1928 High	1928 Low	1927 Aver.	1914 July
Shellac, T. N., bags	lb.	.57	.58	.58	.57	.50	.15½
Simaruba Bark, bales	lb.	.11	.18	.18	.08	.07½	.11
Skullcap Leaves, Eastern, bales	lb.	.....	.35	.40	.33	.45	.15
Western, bales	lb.	.23	.26	.26	.23	.23	.....
Skunk Cabbage, Stripped, bales	lb.	.14	.15	.15	.14	.12½	.10
Snake Root, Canada Natural, bags	lb.	.27	.30	.30	.27	.28½	.14
Canada, Stripped, bags	lb.	.55	.....	.55	.55	.55	.40
Soap Bark, 150-200 lb bbls	lb.	.14	.....	.14	.14	.13	.09
Cut, 125-175 lb bags	lb.	.17	.....	.17	.17	.15	.10½
Crushed, 200 lb bbls	lb.	.16	.....	.16	.16	.15	.09½
Powdered, bbls	lb.	.18	.....	.18	.18	.17	.....
Spearmint Leaves, American, bales	lb.	.25	.30	.30	.25	.23	.15
Herb, bales	lb.	.14	.....	.14	.14	.14	.....
Spermaceti, blocks, cakes, cases	lb.	.32	.35	.35	.32	.32	.....
Spikenard Root, bags	lb.	.23	.....	.23	.23	.17	.10
Squaw Vine, bales	lb.	.20	.....	.20	.20	.18	.08
Squills, White	lb.	.12	.....	.12	.10	.06	.04
Powdered, bulk	lb.	.15	.....	.15	.15	.13	1918
Stavesacre Seed, bags	lb.	.18	.19	.19	.18	.17	.10½
Stillingia Root, bags	lb.	.12	.....	.12	.12	.22	.06
Stone Root, bags	lb	.08	.09	.09	.08	.08	.06
St. Ignatius Beans, bags	lb.	.14½	.15	.15	.14½	.15	.18
St. John's Bread, bags	lb.	.....	.09	.14½	.09	.14	.06
Stramonium							
Stramonium Leaves, bales	lb.	.19	.20	.20	.17½	.18	.07½
Seed, bags	lb.	.07½	.....	.07½	.07½	.07½	.08
Strophanthus Seed, Hispidus	lb.	.07½	.....	.07½	.07½	.07½	.08
Kombe, bags	lb	2.00	2.25	2.25	2.00	1.98	.40
Styrax Liquid, Artificial	lb.	.26	.35	.35	.26	.26	.18
Genuine, USP	lb.	.36	.45	.45	.36	.36	.18
Sunflower Seed, bags	lb	.06½	.06	.06	.06	.08	.04
South American, bags	lb	.06	.....	.06	.06	.06	.....
Tagalder Bark, bags	lb.	.05	.06	.06	.05	.05	1918
Tamarinds, bbls,	lb.	.05½	.06	.06	.05½	.05½	.04½
Kegs	keg	3.85	.....	3.85	3.85	3.82	2.40
Tansy, Herb, bales	lb	.11	.14	.14	.11	.11	.07
Tar, Barbadoes, 50 gal bbls	lb.	1.40	1.45	1.45	1.40	1.40	.....
Thus Gum, 280 lb bbls	lb.	.11½	.20	.20	.11½	.11½	.03½
Tiila, see Linden							
Thyme							
Thyme, Spanish, bales	lb.	.08½	.09	.09	.08½	.08½	.07
French, bales	lb.	.08	.....	.08	.08	.08	.....
Tolu Balsam, see Balsams	lb.						
Tonga Bark, bags	lb.	.55	.....	.55	.55	.70	.40
Root, bundles	lb.	.55	.....	.55	.55	.66	.38
Vine, bundles	lb.	.55	.....	.55	.55	.66	.38
Tonka Beans, Angostura Cases	..	1.90	2.00	2.00	1.90	1.90	.....
Para cases	lb.	.90	.....	.90	.90	.90	.....
Surinam cases	lb.	1.25	1.50	1.50	1.25	1.25	1.10
Tragacanth Gum No. 1 100 lb cases	lb.	1.55	1.60	1.60	1.55	1.55	1.10
No. 2	lb.	1.40	1.50	1.50	1.40	1.40	.80
No. 3	lb.	1.25	1.30	1.30	1.25	1.25	.65
Powdered 50 lb boxes	lb.	.85	1.10	1.10	.85	.85	.....
Turkish cases	lb.	.45	.....	.45	.45	.45	.85
Turmeric Root Madras bags	lb.	.06	.06½	.06½	.06	.06	.04½
Aleppy bags	lb.	.06½	.07	.07	.06½	.06½	.04½
Powdered	lb.	.10	.13	.13	.10	.10	.....
China bags	lb.	.09	.09½	.09½	.09	.09	.03½
Turpentine Venice True, 80 lb cases	lb.	.32	.40	.40	.32	.32	.23½
Artificial, 80 lb cs	lb.	.17	.....	.17	.17	.17	.08½
Unicorn Root, False, see Hellonias True, see Aletris							
Uva Ursi Leaves, bales	lb.	.06	.07	.07	.06	.05½	.03½
Valerian Root, Belgian, bags	lb.	.17	.18	.18	.17	.28	.07
Vanilla Beans, Mexican, whole, cases	lb.	3.25	4.00	4.00	3.25	4.50	4.00
Cuts, cases	lb.	2.50	2.75	2.75	2.50	2.75	3.12½
Bourbon, cases	lb.	2.00	2.75	2.75	2.00	2.30	3.37½
South American, cases	lb.	2.50	2.75	2.75	2.50	2.65	3.50
Tahiti, Green, label cases	lb	2.25	2.50	2.50	2.25	2.37½	2.25
Vetivert Root, 100 lb bags	lb	.30	.....	.30	.30	.33	.....
Violet Flowers, bags	lb.	.70	.....	.70	.70	.77½	.33
Wahoo Bark of Root, bags	lb.	.60	.62	.62	.60	.60	.42
Bark of Tree, bags	lb.	.30	.....	.30	.30	.31	.15
White Pine Bark, Roseed, bags	lb	.08	.....	.08	.08	.07½	.04
White Poplar Bark, bags	lb.	.06	.07	.07	.06	.06	.03½
Wild Cherry Bark, Thin, Green	lb.	.....	.....	.....	.....	.....	.07
Rossed, bales	lb.	.11½	.12	.12	.11½	.11½	.08
Thick Rossed, bales	lb.	.09	.....	.09	.09	.09	.....
Thin Natural, bales	lb.	.07	.08	.08	.07½	.07	.07
Thick Natural, bales	lb.	.05	.06	.06	.05	.05	.06
Wild Indigo Root, bags	lb.	.13	.14	.14	.13	.13	.....
Willow Bark, bags	lb.	.06	.....	.06	.06	.06	.07
White, bags	lb.	.15	.....	.05	.15	.15	.....
Witch Hazel Bark, bags	lb.	.06½	.08	.08	.06½	.06½	.03½
Leaves, bales	lb.	.08	.09	.....	.....	.08	.06
Wormseed, American, bags	lb.	.15	.....	.20	.15	.15	.09½
Levant ,bags	lb	.....	.....	.....	.....	3.81	.36
Wormwood, Herb, Imp, bales	lb.	.10	.10½	.10½	.10	.09	.07
Yellow Root (Zanthorza), bags	lb.	.14	.....	.14	.14	.14	.....
Dock Root, bags	lb.	.10	.11	.11	.10	.09½	.06
Perilla Root, bags	lb.	.14½	.....	.14½	.14½	.14½	.08
Yerba Mate, bags	lb.	.18	.20	.20	.18	.18	.....
Santa, bags	lb.	.09½	.11	.11	.09½	.09½	.08
Zedoary Root, bags	lb.	.06½	.07	.07	.06½	.06	.04½

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January Imports At New York

ACIDS
BORIC—2 casks.
CRESYLIC—65,483 lbs. and 147 casks.
TARTARIC—55,112 lbs. and 50 kegs.
AGAR AGAR—4,000 lbs.
ALCOHOL
AROMATIC—4 casks.
DENATURED—44,000 lbs.
ISOPROPHYL—40,858 lbs.
ALOES—2,000 lbs. and 158 cases.
AMBERGRIS—1 parcel.
AMMONIUM
CARBONATE—22,000 lbs.
ARECA NUTS—150 bags.
ARGOLS—53,626 lbs. and 709 sacks.
ARROWROOT—219 bags and 992 bbls.
BALSAM—6,625 lbs. and 57 cases.
BARKS—2 bales.
CINCHONA—7,501 lbs. and 50 bales.
CONDURANGO—2,292 lbs.
QUEBRACHO—841 bags.
BAY RUM—131 bbls.
BEESWAX—20,931 lbs., 50 bbls. and 583 bags.
BIOLOGICALS—117 lbs. and 1 case.
BORAX—1 keg and 1 case.
CAMPHOR—
CRUDE—1,125 cases.
COUDELILLA WAX—15 sacks.
CARDAMONS—165,000 lbs. and 103 cases.
CARNAUBA WAX—1,068 bags.
CASEIN—731,939 lbs. and 5,995 bags.
CASSIA—9,540 bales and 338 bags.
FISTULA—5,106 lbs.
CHALK—3,963,100 lbs., 4,950 bags and 10 cases.
CHEMICALS—444,862 lbs., 276 drums, 1,162 casks, 5 bottles, 234 cases, 73 pkgs., 5 cylinders.
CINCHONIDINE—47 cases.
ALKALOID—41 lbs.
SULFATE—550 lbs.
COCHINEAL—1,120 lbs., and 10 bags.
COLLODION—1 case.
CORNSILK—44 bales.
CREOSOTE—8,004 tons and 1 case.
CRUDE DRUGS—18,875 lbs.
DECOLORIZING CARBON—28,118 lbs.
DRUGS—4,991 lbs., 67 pkgs., 2 cases, 1 drum.
EFFERVESCENT CITRATE—14,960 lbs.
EPSOM SALT—120,461 lbs.
ERGOT—700 lbs.
ETHYLENE BROMIDE—2,704 lbs.
FLOWERS
CHOMOLE—655 lbs.
LAVENDAR—5 cases.
GELATIN—70 bbls., 5 kegs and 65 cases.
GINGER—259 bags.
GLYCERIN—251,328 lbs. and 130 drums.
GUMS—102,286 lbs., 150 bags and 30 casks.
ARABIC—14,034 lbs.
GAMBOGE—5 cases.
MYRRH—15,200 lbs. and 3 bags.
STYRAX—2,039 lbs.
TRAGACAUTH—38,382 lbs., 318 cases and 599 bags.
HERBS—13,788 lbs.
HOPS—24,231.
IODINE—43,559 lbs., and 34 bbls.
IPECAC—778 lbs., 2 cases and 5 bags.
ISINGLASS—1 case.
JALAPROOT—45 bales.
JAPAN WAX—200 cases.
JUNIPER BERRIES—27,020 lbs.
KOLA NUTS—7 bbls.
LEAVES
BUCHEC—8,500 lbs.
COCO—56 bbls.
HENNA—214 bags.
PATCHOULI—156 bales.
SENNA—200 bales.
LITMUS—2 bbls.
LYCOPODIUM—2,882 lbs.
MACE—45 cases and 30 bbls.
MAGNESIA—CALCINED—216 cases.
MAGNESIUM CARBONATE—2,907 lbs.
MEDICINALS—1,882 lbs. and 610 cases.
MENTHOL—3,900 lbs.
MERCURY—49,214 lbs.
METHANOL—471,336 lbs.
MOLASSES—1,489,749 gals., and 150 bbls.
MUSK, ARTIFICIAL—2 cases.
NUX VOMICA—1,998 pockets.
OILS
ALMOND—11,229 lbs., 75 drums and 20 cases.
ANISE—15 drums.
BAY—25 cases.
BERGAMOT—1,496 lbs. and 300 quarter cases.
BOIS-DE-ROSE—10 drums and 8 cks.
CAMPHOR—274 drums.
CASSIA—33 drums.
CASTOR—15 cases.
CINNAMON—10 bbls.
CITRONELLA—185,000 lbs.
COCOANUT—8,299,939 lbs., 37 hogsheads and 3 cases.
COD LIVER—3,443 bbls and 2 cases.
COPARBA—31 cases.
ESSENTIAL—76,442 lbs., 27 drums and 743 cases.
EUCALYPTUS—9,900 lbs. and 47 drs.
GERANIUM—1,610 lbs., 2 bbls. and 7 tons.
HARLEM—25 cases.
LAVENDAR—2,450 lbs.
LEMON—13 cases.
LEMONGRASS—2 cases.
LIME—28 cases.
MINERAL—64,323 lbs.
MUSTARD—674 lbs. and 4 cases.
OLIVE—259,910 gallons.
SULFUR OLIVE—76,260 gals.
ORANGE—3,960 lbs. and 177 cases.
ORIGANUM—3 drums.
POPPYSEED—5 drums.
SESAME—10 casks and 100 cases.
YLANG-YLANG—1,606 lbs.
OPIUM—5,055 lbs.
PAPAIN—15 cases.
PEPPER—110,620 lbs., and 8,394 bags.
PHARMACEUTICAL PREPS—37 cases.
PHOSPHATE—439,929 lbs.
PIMENTO—1,748 bags.
POTASH
BICARBONATE—4,910 lbs.
PUMICE—751,575 lbs.
PYRETHRUM FLOWERS—225 cases.
QUINCE SEED—4 bags.
QUININE—37 cases.
QUININE SULFATE—75 cases.
ROCHELLE SALT—12,124 lbs. and 20 casks.
ROOTS—2,217 lbs.
ALTHEA—1,980 lbs.
BELLADONNA—8,757 lbs.
GENTIAN—4,000 lbs.
ORRIS—62,792 lbs. and 3 bags.
ROTTENSTONE—40 cases, 710 casks.
SACCHARIN—39 lbs. and 1 case.
SALT—60 tons.
EFFERVESCENT—400 cases.
SAPONIN—1,693 lbs.
SARSPARILLA—2 bales.
SEEDS—516,389 lbs., 10 cases and 74 bags.
CANARY—543,755 lbs., and 3,970 bags.
CARDAMON—6 cases.
CARAWAY—44,000 lbs., and 700 bags.
CASTOR—200 tons.
CUMIN—11,000 lbs., and 655 bags.
FENNEL—16,493 lbs.
FENNGREEK—99,656 lbs.
MUSTARD—40,000 lbs. and 1300 bags.
POPPY—267,133 lbs., and 1,100 bags.
PAPE—124,724 lbs., and 300 bags.
SENNA—LEAVES—199 tons.
PODS—4 tons.
SQUILLS—6,640 lbs.
STARCH—POTATO—172,300 lbs.
STRAMONIUM LEAVES—13,474 lbs.
STRYCHNINE—642 lbs.
TALC—2,470,387 lbs.
TARTAR CREAM—78,942 lbs.
CRUDE—174,376 lbs.
TARTRATE-LIME—463,443 lbs., and 456 bags.
TEA WASTE—35,122 lbs.
TERPINEOL—5,707 lbs.
THORIUM NITRATE—10,896 lbs.
VANILLA BEANS—61,886 lbs., and 348 cases.
VANILLIN—20 cases.
WATERS
FLORAL—7,165 lbs.
LAUREL—176 lbs.
ORANGE—7,242 lbs., and 45 lbs.
WINE LEES—611 lbs.
ZINC OXIDE—66,850 lbs., 65 casks and 225 lbs.
SULFATE—96,071 lbs.

Antiseptic Properties of The Volatile Oils

(*Continued from page 117*)

oil woods, if such a figure of speech be permitted, is full of such substances. However, when we speak of the germicidal action of volatile oils as such we are guilty of loose language scientifically speaking. The chemical composition of these plant products is so variable that it is wrong to lump them chemically. It is equally wrong to lump them therapeutically. What we should do is to speak of the germicidal action of types of compounds and to use specific instances occurring in volatile oils as illustrations. A large amount of work has already been done, but much more is required for a better understanding of the subject.

If it is necessary to study types of chemical compounds represented in volatile oils and even individual members of these types for a scientific understanding of the subject, so it is necessary to study different types of germs and specific representatives of these types of organisms. For a short space of time we were content to speak of the phenol coefficient of germicides only to find out that there is no general phenol coefficient applicable to all germs indiscriminately. If we are to use phenol as a conventional standard, we must specify the particular germ as well. Simply because phenol is toxic to organism "a" when used in a certain strength, it does not follow in the least that you can define the toxic action e. g. of pinene peroxide, or cineol or any other volatile oil constituent toward another organism "b" by comparing it with the action of phenol on "a".

All of this goes to show that the title "Antiseptic properties of volatile oils" not only covers a large field, but is even misleading in so far as it lumps volatile oils on the one hand and toxic organisms on the other. During the plague physicians went about with marks, in the noses of which they burnt what we now would designate antiseptic oleoresins and gum resins. To-day we read in the popular magazines of the antiseptic value of my lady's perfume. Is it the screen in form of a scented handkerchief held before nose and mouth that prevents the passage of organisms or is it the chemical action of the merest traces of ionone of the violet perfume or of the anthranilic acid methyl ester of the orange blossom perfume that does the work provided there is any antiseptic action whatever. While innumerable constituents of volatile oils have antiseptic properties and while we know at present that some of the formerly less respected constituents may be most active as germicidal agents, there has been a great deal of loose talk on the subject, so much indeed that it has brought the topic into disrepute in certain quarters. It is against loose thinking as well as loose talking that these remarks have been penned.

Philadelphia Quartz Co. announces appointment of J. Passmore Elkinton as sales director; Edwin A. Russell, sales manager; and Carl F. Wolcott, field assistant sales manager.

Tablet Tolerances

(*Continued from page 130*)

Gooch crucible, and wash coagulated precipitate several times with old water and finally with a small amount of petroleum ether. Dry the crucible and contents at 130°-140° C to constant weight (about one hour). The weight of precipitate multiplied by factor 0.3871 gives weight of phenolphthalein.

Salol Compressed Tablets shall show a variation not greater than 9% either way from the labelled amount when assayed.

Weigh not less than 20 tablets and determine average weight. Powder and take quantity equivalent to 0.20 to 0.35 gms. Salol. Transfer to 150 cc flask with 50 cc of 2½% NoOH solution and heat for 15 minutes on steam bath. Transfer to separatory funnel and make acid with 10% sulphuric acid. Extract with five portions of chloroform (25-20-10-10-10 cc). In a second separatory funnel wash combined chloroform solution with 10 cc of water. Evaporate chloroform solution at a low temperature allowing last few cc to evaporate spontaneously. Avoid decrepitation. Dissolve extracted salicylic acid in few cc neutral alcohol and add 15cc distilled water and two drops phenolphthalein test solution. Titrate with N-10 barium hydroxide solution, shaking after each addition until a permanent pink color is produced. Each cc N/10 barium hydroxide solution used corresponds to 0.0214 gms. of salol $C_6H_4(OH)COOC_6H_5$.

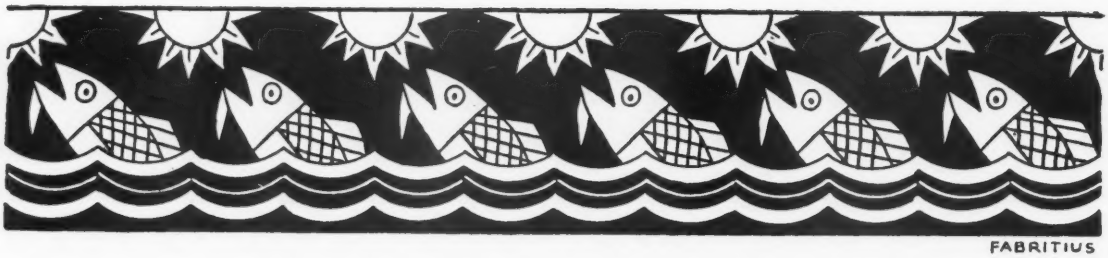
Sodium Bromide Compressed Tablets shall show a variation not greater than 7½% either way from labeled amount.

Weigh accurately at least twenty tablets and determine the average weight. Transfer to a graduated 500 cc flask, dissolve in water, and make up to mark. Remove aliquot of 25 cc (representing approximately five grains sodium bromide) and place in Erlenmeyer flask. Add exactly 50 cc of N/10 silver nitrate solution. Stopper flask and shake until precipitate is coagulated. Add 2 cc of ferric ammonium sulphate T. S. and 2 cc of nitric acid. Titrate excess of silver nitrate with N/10 potassium thiocyanate solution until permanent reddish tinge is attained. Each cc of N/10 silver nitrate solution equals 0.01029 gram NaBr.

Strychnine Sulphate Compressed Tablets shall show a variation from labelled amount not greater than 7.5% either way for tablets of ¼ grain or over; 9.0% either way for tablets from 1/50 to ¼ grains; 12.0% either way for tablets of less than 1/50 grain.

Take at least twenty tablets or sufficient number to represent two grains of strychnine sulphate; place in a 100 cc volumetric flask and add sufficient water to make a thin suspension, and 20 cc of 2% sulphuric acid. Thoroughly disintegrate tablets by shaking at intervals and allow to stand over night or at least 12 hours. Filter, preferably with asbestos and a Gooch crucible to avoid absorption of alkaloid by filter paper. Transfer an aliquot part representing about one grain of strychnine sulphate to separatory funnel, make

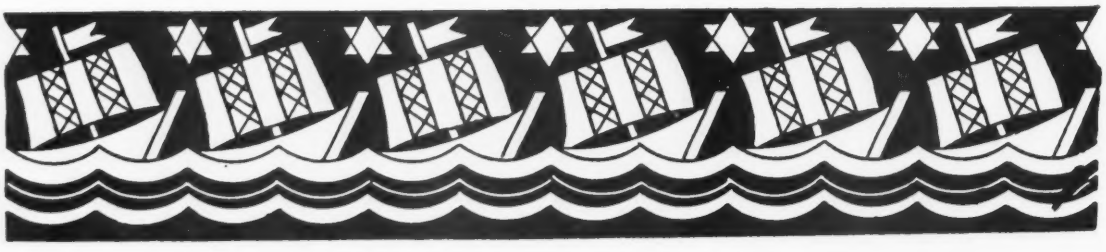
(*Continued on page 186*)



FABRITIUS

NORWEGIAN MEDICINAL COD LIVER OIL

It is a matter of scientific fact that Norwegian medicinal cod liver oil is far superior to any other product in so far as its vitamin content — so necessary for growing children — is concerned. Norwegian medicinal cod liver oil is produced according to the most modern methods, a characteristic trait being that it is practically free from all disagreeable taste and odour. It has pronounced growth-promoting and anti-rachitic effect.



Finest Lofoten COD LIVER OIL Medicinal Quality

"A-A BRAND"

The recognized standard, known for its high vitamin contents. Guaranteed the finest Lofoten non-freezing medicinal cod liver oil

P. R. DREYER Inc.

Sole Representative in the United States

26 CLIFF STREET - - - NEW YORK

CHICAGO PHILADELPHIA KANSAS CITY BALTIMORE ST. LOUIS BOSTON

Part of the Aarsaether fishing fleet in port at one of the accumulating stations situated at Vardo, Norway.

AALESUND - BRÖDR. AARSAETHER A/S - NORWAY

PEPSIN
PANCREATIN
GLANDULAR DERIVATIVES

THE WILSON LABORATORIES

4221 So. Western Ave., Chicago, Ill.

also

816 First Ave., New York
676 Drexel Bldg., Philadelphia
501 Howard St., San Francisco
1220 W. Pico St., Los Angeles
826 Clark Ave., St. Louis

KIELLAND'S BRAND

COD LIVER OIL

NORWEGIAN

Finest U. S. P. - Medicinal - Non Freezing

Also Specialists in Cod Liver Oil for Poultry

For Import and Immediate Spot Delivery

W. BENKERT & CO., Inc.

81-83 Fulton Street New York

H.J. BAKER & BRO.

ESTABLISHED 1850

"VITAMOIL"

finest medicinal non-freezing

NORWEGIAN COD LIVER OIL

Refined by Albert Mohn, Bergen, Norway

GLYCERINE

Chemically Pure **Guaranteed B. P. Test**

Importers of all grades—Specializing in

English German Dutch

manufacture

Stocks available in New York City

"STURGEON BRAND" PRECIPITATED CHALK

manufactured by John & E. Sturge, Ltd., Birmingham, England

Uses: Specially prepared for Dentifrices, Cold Creams, Toilet Preparations.

Guarantees: Free from grit—Uniform U. S. P. —B. P. Specifications.

REFINED CAMPHOR

Granulated **Powdered** **Tablets**

THYMOL CALOMEL BENZOIC ACID

Agents for Howard & Sons, Ltd., London, England

Spermaceti
Magnesite (Grecian)
Magnesium Chloride
Formaldehyde
Oxalic Acid
Copper Sulphate
Senega Root
Caustic Soda
Soda Ash
Permanganate Potash

H.J. BAKER & BRO.

271 MADISON AVENUE
NEW YORK CITY

Group Publicity

(Continued from page 132)

In the past year more new European pharmaceutical products have come into this country than in any previous year since the World War. Two new substitutes for Insulin, in the form of tablets to be taken orally, have recently come from Europe. One company is reported to have paid $100,000 for one such substitute to protect their own Insulin business in this country and another similar product will soon be on the market here. It is now being offered for sale. This is only a forerunner of what is going to happen next year.

Foreign propaganda is now active in attempting to bring about a downward revision of our tariffs on chemical and pharmaceutical products. Without such protection we shall again be at the mercy of foreign competition because of the low wages paid in Europe. There is now more interest in American markets among European pharmaceutical houses than ever before.

The amount of pharmaceutical research work now being done in Europe is simply astonishing.

Avenues for the distribution of European pharmaceuticals in this country have already been arranged.

We should go on record at once opposing any tendency toward downward revision by Congress of our chemical and pharmaceutical schedules.

Crestall Brand

COAL-TAR DISINFECTANTS

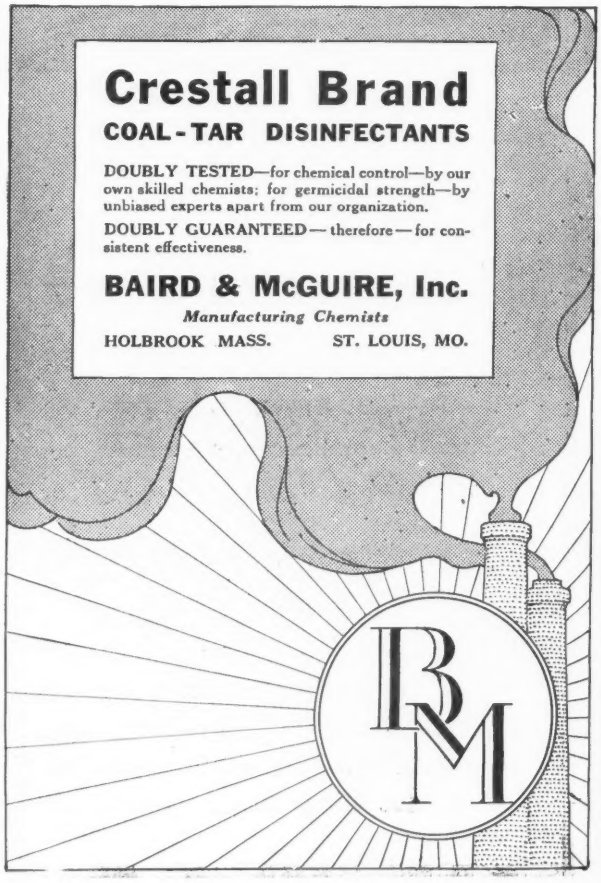
DOUBLY TESTED—for chemical control—by our own skilled chemists; for germicidal strength—by unbiased experts apart from our organization.

DOUBLY GUARANTEED—therefore—for consistent effectiveness.

BAIRD & McGUIRE, Inc.

Manufacturing Chemists

HOLBROOK MASS. ST. LOUIS, MO.



MERCK'S SALICYLATES

All U.S.P.X

Acid Acetylsalicylic — Acid Salicylic — Sodium Salicylate

Methyl Salicylate — Salol — All the minor salicylates

MERCK & CO.

INC.

MANUFACTURING CHEMISTS

SUCCESSORS TO

POWERS-WEIGHTMAN-ROSENGARTEN CO.

Philadelphia New York **RAHWAY, N. J.** St. Louis Montreal

SEYDEL

MEDICINAL CHEMICALS

BENZOCAINE U. S. P.

(*Ethyl Amino Benzoate*)

(*ANESTHESIN*)

An oil soluble local anesthetic employed in cough troches, toothache and earache remedies, suppositories, ointments, nasal creams, sprays, nausea tablets, etc. Leaflets and formulas supplied on request.

In shaving creams and other preparations for the skin, Benzocaine is of value in allaying irritation.

SEYDEL CHEMICAL COMPANY

Jersey City, N. J. Nitro, W. Va.

Established 1904

Barrett Standard

POLAR

NAPHTHALENE

Flake---Ball

The Barrett Company

B

40 Rector Street New York, N. Y.

Does Quicker Mixing appeal to you?

UNQUESTIONABLY

LIGHTNIN

PORTABLE MIXERS

will process any product that will flow

QUICKER *and* BETTER
and at
LESS COST *than* ANY OTHER METHOD
and stand under the load

SIMPLE — ECONOMICAL — DEPENDABLE

Practical and Economical Application

Direct Drive and Geared Types

All Sizes and Speeds

1/20 H.P. to 100 H.P.

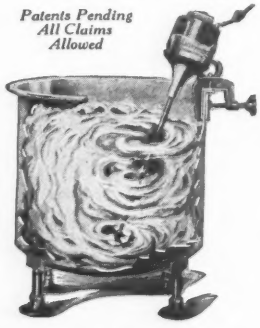
HEAVY DUTY TYPE
1-3 to 1½ H. P.

Telescopic shaft; single or dual propellers, universal adjustable clamp—ball thrust bearing motors—outboard shaft bearing.

There is a LIGHTNIN MIXER *for the job regardless of the nature of the product—or size and shape of tank—open or closed—process hot or cold.*

Readily attached to your present equipment—no installation expense.

Patents Pending
All Claims Allowed



USED BY MORE THAN 50 DIFFERENT LINES OF INDUSTRY.

Catalogue on request

MIXING EQUIPMENT CO.
INCORPORATED
Originators and the World's Largest Manufacturers of Electric Portable Mixers
229 East 38th St., NEW YORK, N. Y.

Increased Cost of Business

(*Continued from page 134*)

advertising, it is natural that the advertiser should feel that if he is going in at all, he must use large space in order to get attention.

Advertising is such a powerful business weapon that in those bygone days almost any kind of advertising—if persisted in—would produce satisfactory results. Advertising space was cheap, the number of publications was comparatively small and the amount of advertising they carried seems insignificant to-day. But with the changed conditions outlined above, the advertiser must change all his strategy in order to succeed. The oldtime hit-or-miss methods won't do—nowadays they always miss. It costs so much to advertise that every dollar invested must now show a profit or disaster will follow.

There are certain questions which every advertiser should, at the close of the year, ask himself and correctly answer before he commits himself to further expenditure. This is particularly true if his business has not been as good in the past year as it was during the years immediately previous; or if, with an increased volume, he finds an alarming decrease in net profits.

Here are some of the questions:

Am I *sure* of the selling value of my advertising ?

Am I *sure* that it is based on a proper analysis of my actual market ?

(*Continued on page 184*)

Synonymous with American Synthetic
ISERMANN

AMARETTE

An odor creation that is essentially fragrant and refined. Blends very readily in bouquet types. If you wish your products to equal the best American and foreign odors use Amarette.

The Pound $14.50

VAN DYK & COMPANY

6 Platt Street *Founded 1904* New York City

In making perfumes with Denatured Alcohol, insure the quality by specifying.
Van Dyk & Co.'s Brand Diethyl Phthalato

Pure, Dependable, Uniform Quality

ETHER

Anesthesia & Concentrated also Technical

For Seventy Years Manufacturing Medicinal Drugs and Chemicals

CHARLES COOPER & CO.

194 Worth Street New York, N. Y.

Established 1857 -- Works: Newark, N. J.

ANOTHER
DRUG, CHEMICAL AND
ALLIED TRADES DINNER

You well know the good time we all have at these gatherings. Pleasant contacts, renewal of acquaintances, and in all, a valuable medium for business.

Make a note of the date, and make your plans for:-

Third Drug, Chemical and Allied Trades Dinner

TO BE HELD

THURSDAY EVENING

March 15th, 1928

AT THE

Waldorf-Astoria

Under the auspices of
Drug and Chemical Section New York Board of Trade and Transportation

Meet the principals and the prominent men of the industry.

Tables for 10 may be secured in advance

MAKE RESERVATIONS IMMEDIATELY
$6.00 PER COVER

S. B. PENICK
Chairman, Drug & Chemical Section
41 Park Row, New York City

80% saved

on the cost of packing material

BUNDLING packages in dozen lots by machine saves, roughly 80% on the cost of cartons for packing such products as tooth paste, shaving cream, etc. Take your own carton costs for a year and figure what an impressive saving this would make for you!

And, in addition, one bundling machine saves from $4,000 to $5,000 a year in labor.

The same display which now appears on your cartons can be printed on the wrapper—in fact, the wrappers lend themselves to finer printing than do cartons. The machine automatically attaches printed end-seals.

Bristol-Myers, Norwich Pharmacal Company, National Biscuit Company, Lorillard Tobacco Company, Ohio Match Company are among the users of this machine. They have tested the strength of bundles wrapped on it by shipping them and having them returned. These tests have proved entirely satisfactory.

Find out how much it will save you

We will give you an estimate on how much our bundling machine will save you on your present packing methods. Write to our nearest office, sending a dummy of your package.

PACKAGE MACHINERY COMPANY
SPRINGFIELD, MASSACHUSETTS

New York, 30 Church St. Chicago, 111 W. Washington St.

SURE!

Isn't it great to feel sure of your goods being right?

And then to know that they will reach your customers in the same condition?

Our continuous Thread Screw Caps for bottles are being used by those who want to know positively that the tightest sealing medium is protecting their product.

Do you?

Bottle Closure Specialists Since 1890

Ferdinand Gutmann & Co.

168 - 39th St., Brooklyn, N. Y.

also makers of

Saniseal Metal Milk Caps
Crown Corks
Special Purpose Caps
Distilled Water Caps

SILVER LABEL GELATINE

Pure Food and Technical

COIGNET GELATINES

17 State Street, New York City

Dissosway Chemical Co., Inc.

Manufacturing Chemists

55-63 ECKFORD STREET

BROOKLYN, N. Y.

Antimony Potassium Tartrate, Calcium Lactate, Calcium Lactophosphate, Lithium Citrate, Rochelle Salt, Potassium Acetate, Arecolin, Caffein Hydrobromide, Atropin, Eserin, Homatropin, Digitalin, Lactic Acid U. S. P., Pilocarpin, Strychnin, Scopolamin, Spartein

Increased Cost of Business

(*Continued from page 182*)

Am I *sure* that it is giving me the coverage in that market which I ought to have ?

Am I *sure* that that coverage is being secured as economically as possible ?

Am I *sure* that the peak of my advertising expenditure agrees with the peak of consumer purchase—not necessarily the peak of *my* sales ?

Am I *sure* that for each type of consumer I am using the right type of message—even if that means preparing half a dozen different messages for half a dozen different audiences ?

Am I *sure* that my advertising is taking into account the newer ideas and attitudes that the public is always ad opting as the result of physicians' latest recommendations and competitors' advertising ?

Nor is this everything that the advertising manufacturer should make sure of. He should know whether his package, his prices, his discounts, his standing with the trade are such as to enable him to meet competition, to meet the requirements of the public, and to do business at an actual profit.

And he should, moreover, assure himself positively that the price he gets for his goods is high enough to enable him to make an actual profit, adequately to take care of overhead and depreciation, and set up for himself a reserve against future needs.

ALCOHOL!

Pure, Special & Completely Denatured

National Industrial Alcohol Co. Inc.

NEW ORLEANS, LA.

COLLODION

U.S.P. and Flexible

Amyl Acetate

Made for Medicinal Use at Newark, N. J.
FOR SEVENTY YEARS

CHARLES COOPER & CO.

194 Worth Street **New York, N. Y.**

Established 1857 -- Works: Newark, N. J.

Smith Bros. Cough Syrup

(Continued from page 128)

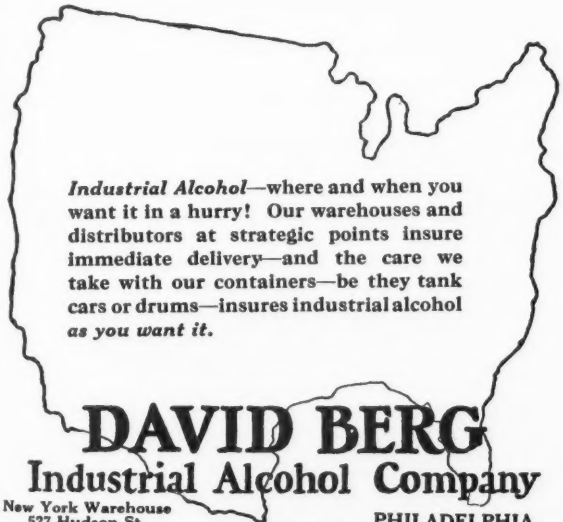
While the installation does not permit of completely automatic operation, this is not considered necessary at the present stage of development. However the equipment is capable of quite high production and at this time is standing idle over comparatively long periods. As the installation is made up of standard units that can be changed around or used for other products, it makes an attractive arrangement for a product that is not moving in sufficient volume to create pressure on the production department.

Royal Brand
Cocoa Butter
U.S.P. U.P.4

Used by leading manufacturers of pharmaceutical and toilet preparations, Royal Brand Cocoa Butter is well known to the Drug Trade as the finest grade obtainable.

Send for price and market information now, whether you are in the market or not, so we can keep you posted.

A. N. Stollwerck, Camden, N. J.



Industrial Alcohol*—where and when you want it in a hurry! Our warehouses and distributors at strategic points insure immediate delivery—and the care we take with our containers—be they tank cars or drums—insures industrial alcohol *as you want it.

DAVID BERG
Industrial Alcohol Company

New York Warehouse
527 Hudson St.

M. J. Daly & Co.
605 Gerke Bldg.
Cincinnati, Ohio
J. C. Drouillard Co.
Rockefeller Bldg.
Cleveland, Ohio
August Hoffmann
Majestic Bldg.
Indianapolis, Ind.
J. Rosenfield
P. O. Box 424
Lancaster, Pa.

DISTRIBUTORS
Rolls Chemical Co.
483 Ellicott Sq. Bldg.
Buffalo, N. Y.
H. H. Reed
549 W. Washington St.
Chicago, Ill.
A. H. Selling
527 Hudson St.
New York City
N.S.Wilson & Sons, Inc.
74 W. 2nd St.
Boston, Mass.

PHILADELPHIA
W. P. Williams Co.
216-220 Ellsworth Ave.
Grand Rapids, Mich.
Chas. A. Webb & Co.
514 S. Eutaw St.
Baltimore, Md.
E. E. Zimmerman Co.
Bessemer Bldg.
Pittsburgh, Pa.
Morley Bros.
W. End of Dodge Ave.
Detroit, Mich.

Ethyl U.S.P. Alcohol

Denatured Alcohol in Formulae.

Quality Products

As the exclusive American representatives for

Bruno Court, S. A.
Grasse, France

Haarmann & Reimer
Holzminden, Germany

Christo Christoff
Kazanlik, Bulgaria

and as the owners and operators of the most important factory in the United States for the manufacture of aromatic chemicals, we are headquarters for perfuming products of the very finest quality.

Jasmin Concrete F

One of the most noted natural flower products of Bruno Court. Widely accepted as the most economical and effective means for developing a superb natural Jasmin note.

Lily of the Valley H & R

This well known Haarmann & Reimer product, an indispensable item in many world-famous perfumes, reproduces the fragrance of the Lily of the Valley with astonishing fidelity.

Otto of Rose C X C

The leading French and American perfumers have for years given preference to this fine brand of Otto of Rose.

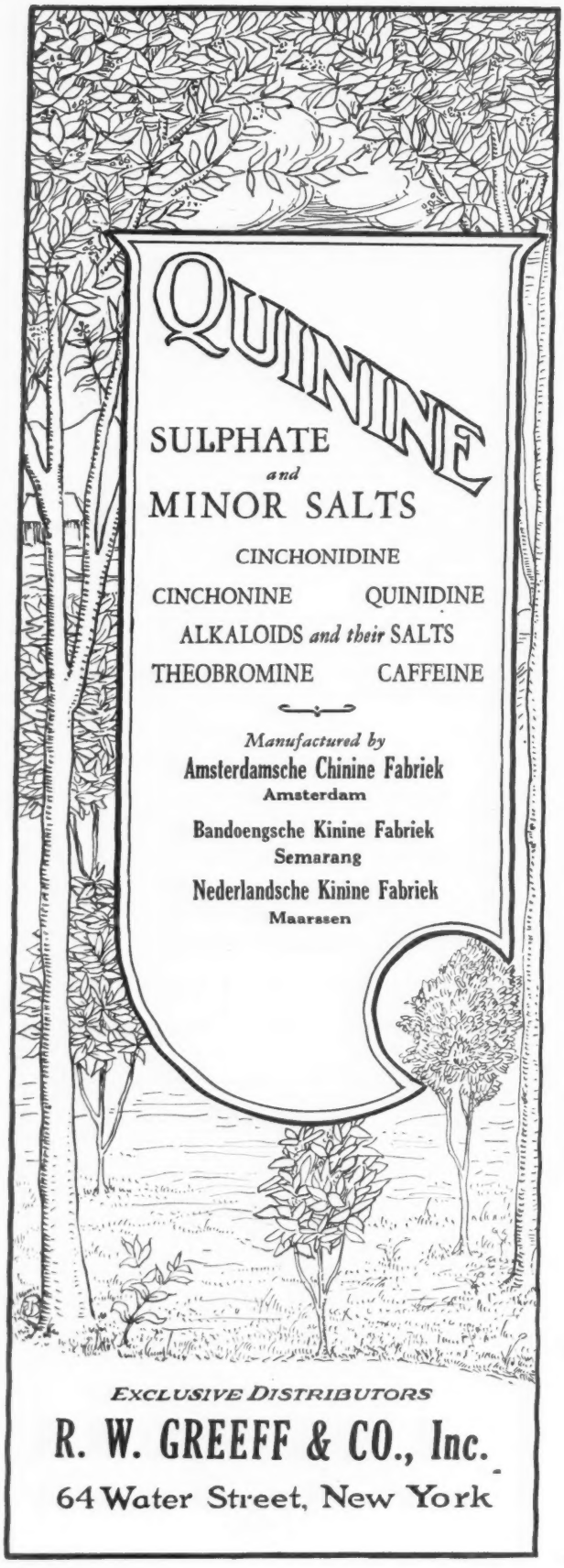
Rhodinol Absolute
Geraniol Absolute
Citronellol Morana

The unsurpassed quality of the three foregoing products demonstrates effectively our ability to manufacture aromatic chemicals that successfully withstand comparison with the best European brands.

Working samples of the products listed above will be sent promptly upon request and without charge.

Exclusive American Agents

MORANA
INCORPORATED
GENERAL OFFICES
61-63 Vandam St.
NEW YORK
228 N. La Salle St.
CHICAGO
42 Wellington St. E.
TORONTO
WORKS
Elizabeth, N.J.



Tablet Tolerances

(*Continued from page 177*)

distinctly alkaline with ammonia and shake out with several portions of chloroform until tests with Mayer's Reagent indicate that the aqueous solution has been completely exhausted of the alkaloid (about six shakings will be required). Evaporate the combined chloroformic extracts to dryness on water bath (Be careful to avoid decrepitation). Dissolve residue in a few cc of neutral alcohol. Add 10 cc of N/20 sulfuric acid, and titrate excess of acid with N/50 potassium hydroxide, using methyl red indicator. Each cc of N-20 sulphuric acid, consumed corresponds to 0.021419 grams of strychnine sulphate $(C_{21}H_{22}P_2N_2)$ $2.H_2SO_4$ plus $5H_2O$.

1857 *Made For Seventy Years*

SILVER NITRATE C.P.

1928 *At our Plant Newark, N. J.*

For Medicinal Use

CHARLES COOPER & CO.

194 Worth Street New York, N. Y.

Established 1857 -- Works: Newark, N. J.

"Standard of Quality Always"

PLYMOUTH

MEDICINAL WHITE OILS

Russian *Domestic*

COLD CREAM OILS

and

ALL RAW MATERIAL FOR TOILET CREAMS

STEARATES

ZINC ALUMINUM MAGNESIUM

Made Right *Priced Right*

M. W. PARSONS IMPORTS

AND

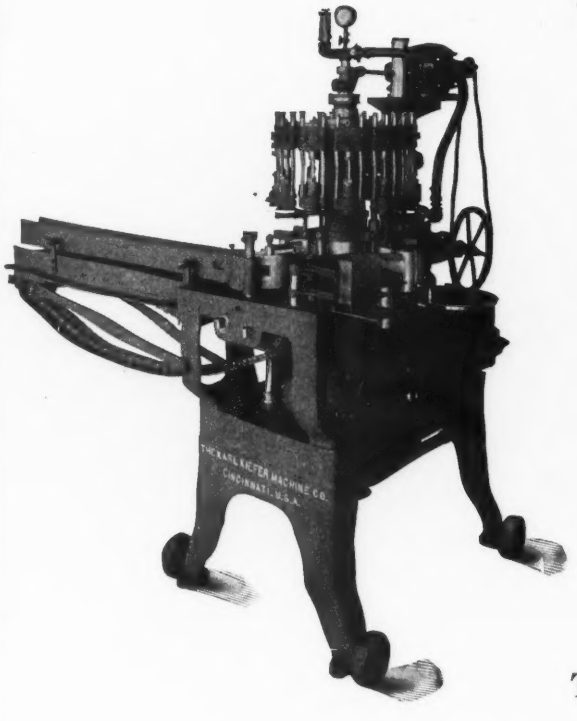
Plymouth Organic Laboratories

55 ANN STREET, NEW YORK

Sprinkler Tops

WHITE METAL MFG. CO.
Hoboken, N. J.

Chicago Representative	*Philadelphia Representative*	*Boston Representative*	*Detroit Representative*
Chas. A. Rindell, Inc.	William F. Kiefer	A. L. Drown	R. M. Stevenson
64 W. Randolph St.	420 Bulletin Bldg.	173 Milk Street	506 Donovan Bldg.



The Machine That Bottles

Phillips' Milk of Magnesia, Nujol, Sloan's Liniment, Scott's Emulsion, Squibb's Mineral Oil, Tanlac, Herb Juice, Piso's Cough Syrup, Mercurochrome, Glyco Thymoline, Packer's Tar Soap, Liquid Veneer, etc.

The Kiefer Automatic Rotary
Vacuum Filling Machine

Fills bottles accurately and neatly at high speed.

Requires only the loading of the bottles on the feed conveyor. No jamming; no breaking; no upsetting.

Waste of product is entirely avoided. Bad bottles are skipped.

Bottles may be discharged automatically upon belt or corking conveyor.

Made in four sizes.

If you are interested in cutting your production costs, write for catalog.

The Karl Kiefer Machine Company
Cincinnati, Ohio

The Drug Market-Place — Wants and Offers

Business Opportunities

DRUG PRODUCTS for export to Palestine. We are in a position to successfully market and advertise American products in Jerusalem and Jaffa. Established wholesale druggists since 1881. W. Schocher & Co. Care of T. M. Charlop, 926 Bronx Park South, New York City.

INDIAN DRUGS AND HERBS. We desire to export these to U. S. A. Will importers or brokers kindly write to India Agencies m.b.h., 16, Spitaler Street, Hamburg, Germany.

HAMBURG—We desire to export European Crude Drugs to U. S. A. Importers or brokers may apply to Dr. Schorr & Erwin Renyi Kommanditgesellschaft, Hamburg 36, Gr. Theaterstr. 41.

ESSENTIAL OIL IMPORTERS interested in oils produced in Palestine. These oils have long been exported to Europe and then to U. S. Direct connections desired. Oils of highest purity. Now producing thyme, organum, jasmin, and geranium. W. Schocher & Co. Care of T. M. Charlop, 926 Bronx Park South, New York City.

SALESMEN wanted who have an established trade with doctors and druggists in your territory, to sell an ethical indigestion powder called Cal-So-Gin, excellent side line, commission basis. Write for particulars. Lincoln & Bosworth, Chemists, Providence, R. I.

A remarkable proprietary medicine, result of years research, awarded Gold Medal and Diploma for a Scientific product, has Government alcohol permit, possibilities unlimited. Selling in United States and some foreign countries. Seeks party to advertise the product and take over exclusive selling rights for the world. Box 683 DRUG MARKETS.

Situations Wanted

POSITION WANTED—Chemist and Bacteriologist-University Graduate, more than ten years' diversified experience in laboratory work mainly on food products. Special knowledge of the manufacture of extracts and flavors. Have several years' sales experience in flavors, extracts, perfume and essential oils. Box 685 DRUG MARKETS.

GRADUATE CHEMIST, age 31, married, with 10 years experience as an executive in sales and manufacturing chemicals and specialties desires connection in the metropolitan district. Box 680 DRUG MARKETS.

SALES MANAGER now engaged. Well known and personally acquainted with wholesale drug, pharmaceutical and proprietary manufacturers throughout the country seeks new connection or sales agency for specialty preferably. Future opportunity paramount immediate recompense secondary. Box 677, DRUG MARKETS.

YOUNG MAN, 25 years experience as pricer, buyer, and department head in wholesale drug house wishes permanent connection. Could be sales manager in small house or assistant in large one. Services available January first. Located in the West at present. Box 676, DRUG MARKETS.

CHEMIST, middle-aged, wants part time employment. Research either laboratory or literary. Wide variety of subjects including fermentation. Box 672, DRUG MARKETS.

REPRESENTATIVE—Engineer available for firm not having New York office for transaction of business in sales, purchasing and settlement. Competent service given on yearly rate. Box 671, DRUG MARKETS.

Rates—All classifications $1.00 an issue for 20 words or less; additional words 5c each.

Payment must accompany order, add 10 cents if replies are to come to a box number and be forwarded.

DRUG MARKETS
25 Spruce St. New York

Help Wanted

SALESMEN WANTED to sell Tablets on commission basis, by firm established twenty-three years. Men with organized trade with wholesalers preferred. Excellent side line. Reply fully stating experience. Confidential. Box 684 DRUG MARKETS.

SALESMAN WANTED for New York City and representatives for other cities for products going to following industries: toilet preparations, textiles, patent-medicine, flavoring extract, tobacco, inks, garages, etc. To men with following in any of the above lines an attractive proposition is waiting. Replies will be held in confidence. Box 679, DRUG MARKETS.

EXPORT MANAGER, $10,000

Preferably of the Nordic Race, between thirty-five and forty. Should have pharmaceutical experience, have traveled Europe, South America and the Orient and be able to speak and write English, Spanish, French and German. For further particulars address R. W. Bixby, Inc., 600 Downtown Bldg., Buffalo, N. Y.

PHARMACEUTICAL CHEMIST, with real executive ability to have complete charge of manufacturing as superintendent of laboratory. Must be well educated and have wide experience and a thorough practical knowledge of Pill and Tablet manufacture as well as pharmaceutical manufacturing in general.

To a man who can qualify we offer a good position with excellent future. Write giving detailed information as to education, experience and references. All correspondence strictly confidential. Box 667. DRUG MARKETS.

YOUNG MAN, sales experience in drug or chemical trade wanted by one of the largest and oldest houses in the trade. Must have good personality. Exceptional opportunity as assistant to manager of rapidly growing department. Box 682, DRUG MARKETS.

SALESMAN—Experienced in selling Essential Oils, Flavors, Perfume materials to manufacturers, etc. Box 672, DRUG MARKETS.

SALESMEN—retail drug trade—sell new perfume novelties. Liberal commissions. State reference, particulars, territory covered. Box 681, DRUG MARKETS.

WANTED SALESMEN and demonstrators Lesculene, a preparation for pimples and skin irritations. Send 60c for sample and free offer. The Lesculene Co., Dept. R., Henderson, Ky.

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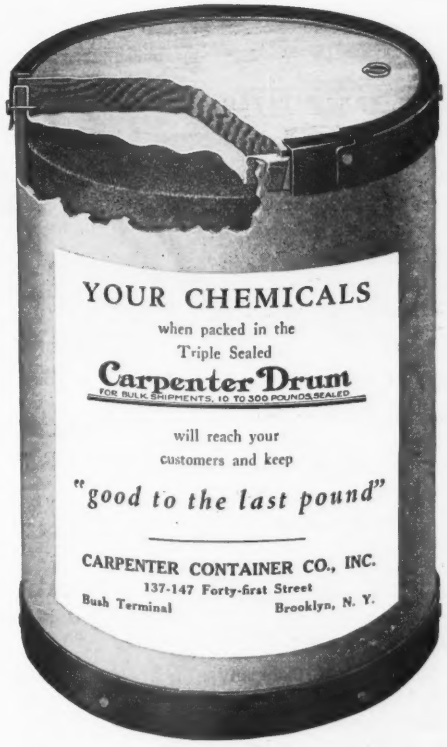

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Fries & Fries Co.
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Givaudan Delawanna, Inc.
Morana, Inc.
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Pfaltz & Bauer, Inc.
Rhodia Chemical Co.
Ungerer & Co.
Wangler-Budd Co., Inc.
Van Dyke & Co.

BEESWAX
Will & Baumer Candle Co., Inc.

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Wilson Laboratories

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Morano, Inc.
N. W. Chemische Fabrik Naarden
Ungerer & Co.
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N. Y. Quinine & Chemical Works
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Merck & Co.
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Givaudan Delawanna Inc.
Mathieson Alkali Works (Commonwealth Division)
Monsanto Chemical Works

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Sun Tube Co.
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Carpenter Container Co.

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STENCILING MACHINES
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PRIVATE BRAND MANUFACTURING
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Who's Who
in the Drug Industries

Edgar Albert Bonitz, pres. American Chewing Products Corp., Newark, N. J. Born: 19 Feb., 1887, Burlington, Ia.; mar: Katherine Beatrice Roche, 6 Aug. 1912; educat: Passaic High School, Business Coll.; National Gum Co. Inc., Newark, N. J., vice-pres. treas. 1912-17; American Gum & Candy Co., Newark, N. J., Pres. 1917-21. Specialized in the mfg. of all kinds of medicated chewing gum, and claims to be the first to perfect a laxative chewing gum which he sold to Health Products Corp. Clubs: Elks, North End Country, Waldrich Rod & Gun. Hobbies: Cultivation of rare roses, love of nature.

Edgar Brock Carter, dir. of laboratories, Swan-Myers Co., Indianapolis, Ind. Born: 22 Apr. 1886, Elkinsville, (Brown Co.) Ind.; mar: Susie Field Huffines, (died 1918); mar: 2nd. Ruth Ann Cheney, Indianapolis, Ind., 1922; children: one son; educat: Univ. Indiana, A. B., 1911. Cunningham Sugar Co., Sugarland, Texas, chem., 1908; chief chem. 1909-10; Landon C. Moore Labs., Dallas, Texas, bacteriologist, 1911-15; Swan-Meyers Co., 1915 to date. Memb: Alpha Chi Sigma; F. & A. M.; Amer. Chem. Soc. (Sec. Ind. Sect., 1918-21; chrm, 1921-22 and Sec. Divn., Chem of Med. Prods. 1919-22; chrmn. 1922-24); Soc. Amer. Bacterlgts., (Sec. Ind. Branch 1919-21; chrmn. 1921-22); Amer. Pblc. Health Assn. (fellow); Amer. Pharm. Assn; Brd. Trustees, Ind. Coll. Pharmacy, 1927. Clubs: Scientech, Torch, Indianapolis Ath., Avalon Country. Hobby: golf.

Rex R. Case, pres. Herb Remedy Labs., Newark, N. J. Born: Lansing, Mich., 10 Aug., 1874; mar: Maud Finley, St. Louis, Mo., 16 May 1904; children: (4) 2 sons, 2 daughters; educat: Univ. Mich., Law School. LL.B., 1894. N. Y. World, promotion mgr., 1904-16; N. Y. Herald & Sun, promotion mgr., 1921; N. Y. Amer., promotion mgr., 1922-3; Jersey Trancript Pub. Co., pres. & treas., 1926 to date. Asst. bus. exec. Airplane Engr. Dept., U. S. Gov., McCook Field 1919. Is founder of Herb Remedy Labs., and is largely inspired by a life-long desire and effort to make sick people well. Memb: Zeta Psi-Coll. Frat. Hobbies: golf, chess, making good.

Harry H. Caswell, treas. & general mgr., W. F. Young, Inc., Springfield, Mass. Born: 28 June 1883, Glastonbury, Conn.; mar: Estelle, M. Miller, Providence, R. I., Jan. 1905; children: (2) 1 son, 1 daughter; educat: Mas. Coll. Osteopathy. With W. F. Young Inc., 24 yrs. Formerly, Memb. City Council, pres. Brd. Alderman, Fuel Administrator. Now memb. Park Comm. & pres. Chamb. Commerce. Clubs: Rotary, Colony, Nyasset, Spgfd. Country, past potentate, Shrine, Proprietary Assn. Hobby: golf.

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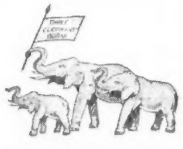

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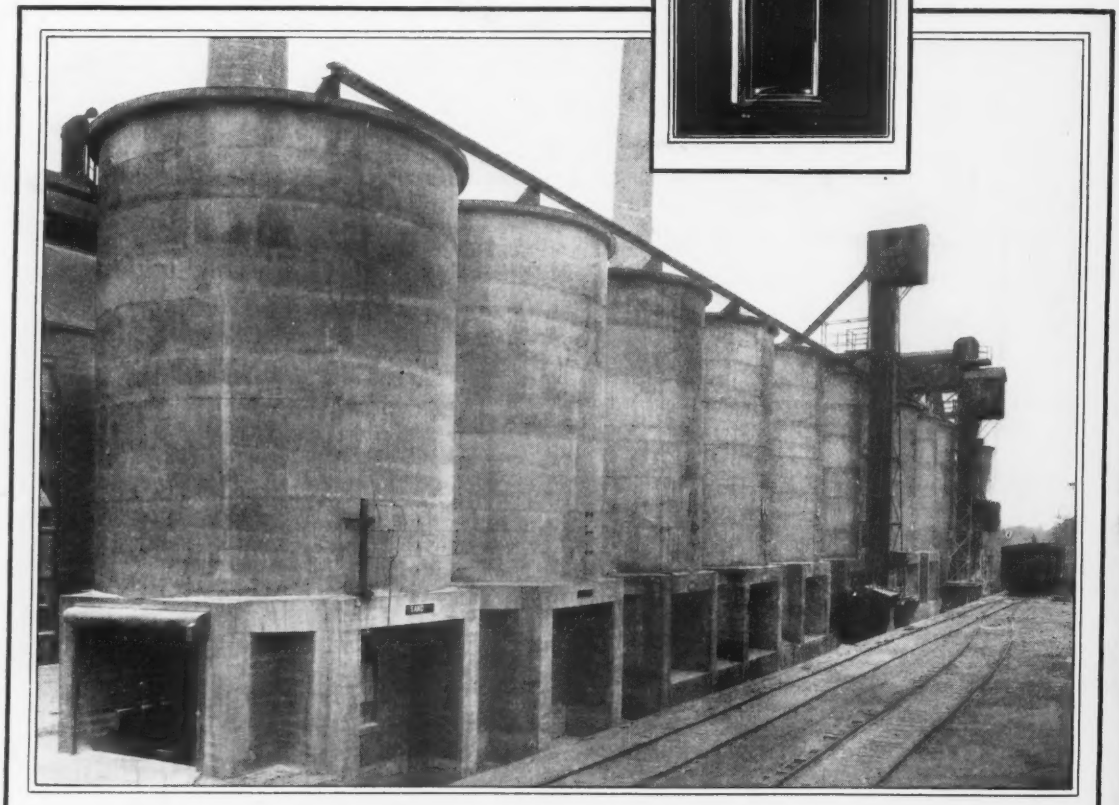
This photograph shows the huge storage tanks for raw material at the Charleston, W. V., plant of the Owens Bottle Company



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